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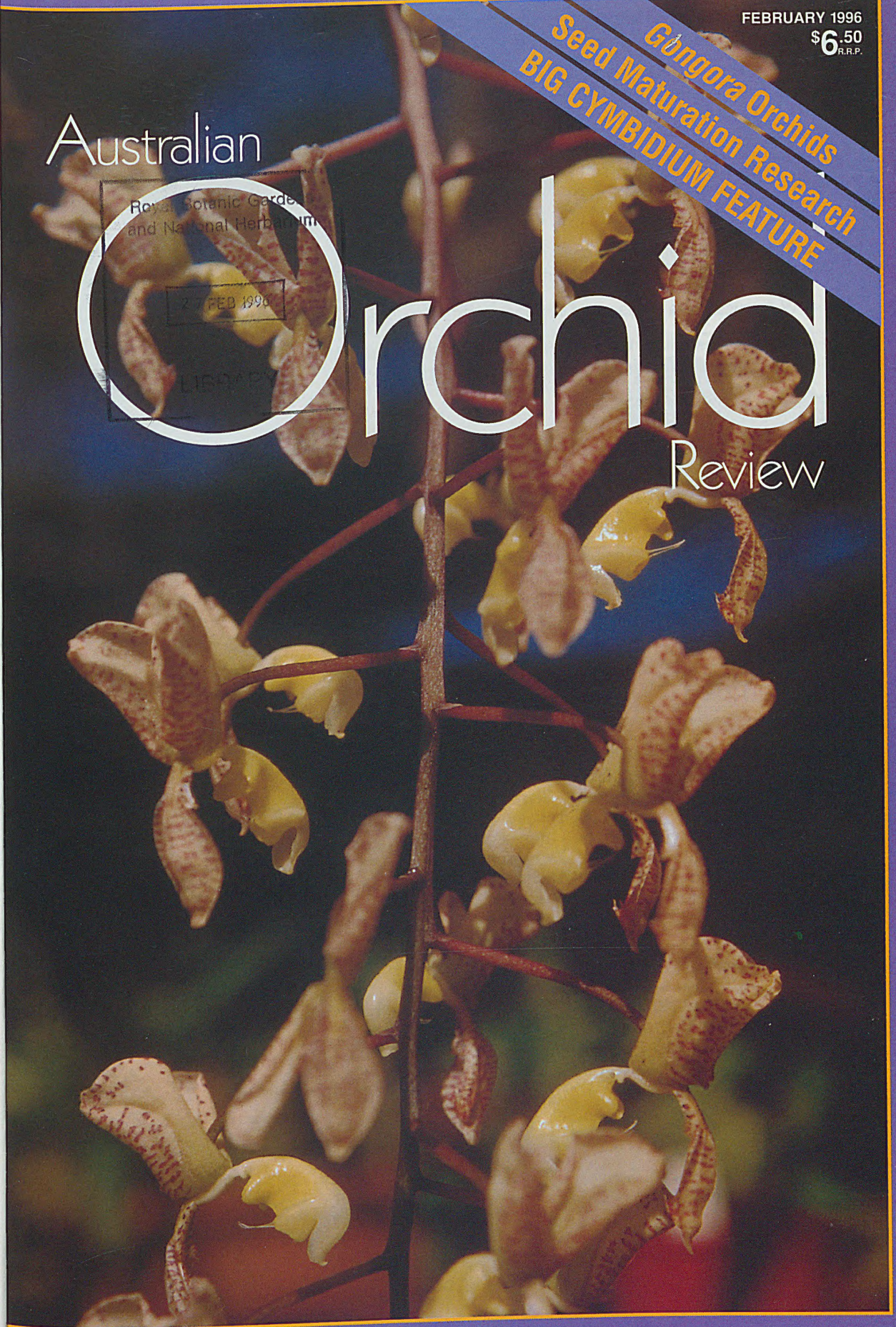
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Gongora truncata –
Photo: Rod Rice.
See *"Gongora"* (Ruiz and Pavan) on page 4.

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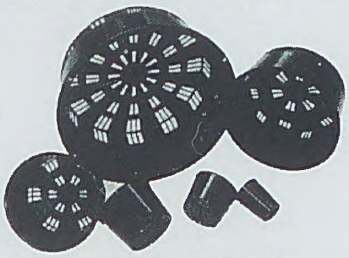


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Volume 61 — No.1 February, 1996

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Articles for publication and consideration should be sent to:

AOR Editor, David Wallace,
14 McGill Street,
Lewisham, NSW 2049
All other correspondence to:
AOR Publisher, Graphic World,
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Gongora rufescens

With the recent craze for the genus *Stanhopea* in the eastern states of Australia over the last couple of years, another closely related genus emerging and fast becoming fashionable is the *Gongora*. The genus *Gongora* is not by any means new to us, and in fact was once known as the genus *Acropera*. Lindley.

Most of us would be familiar with the species that once used to be common such as *Gongora galeata* (Lindley) Rchb.f. *G. truncata* Lindley and *G. quinquenervis* Ruiz and Pavon, and perhaps be still lucky enough to have them and or others of the 53 known species of these fantastic orchids somewhere in our collections. As they are now a particularly rare group of orchids due to the destruction of their native habitat and over zealous collecting etc.

Luckily though responsible conservationists and botanists are producing seed from a wide range of species in this genus and other genera, then sending seed or protocorm off to other conservationists and distributors of rare flora in different parts of the world. Although these orchids and many others may not be everyone's cup of tea, it is imperative that we try and preserve these species and many others.

In conjunction with the Museum of Natural History Florida, the University of Cuenca Ecuador, the Munich Botanical Gardens Germany and the *Paphiopedilum* Research Centre Australia, strong efforts are being made to artificially propagate as many of these species as we can. To date we have 35 species of *Gongora* in cultivation in Australia, and as they flower selfings or sib crosses are being made.

The *Gongora* orchids are very curious and beautiful, and they command an individual

Gongora

(Ruiz and Pavon)

Text and photography by Rod Rice M.A.I.H.



attraction all of their own. The intoxicating and often interesting perfumes, are reminiscent of everything from industrial sticky tape of *Gongora leucochila* Lemaire, to the very sweet citrussy smell of *G. truncata*. The fantastically coloured flowers protrude from generally long pendulous inflorescences of up to 100cm long, that can look like a flock of birds in flight or an invasion by weird shaped martians.

The perfumes themselves are more than worth mentioning, they are quite individual from each other and may only be noticeable at certain times of the day or evening. This and identification of the pollinator is something botanists have recognised as being of major assistance in the correct identification of individual species. Generally the perfumes are most noticeable during the warm parts of the day.

The majority of Gongoras are very easy to grow, and you grow them basically the same way as the Stanhopeas. Some of them prefer a bit of warmth in winter (some of these will be mentioned later) but otherwise they should be grown in a very similar fashion.

They should be grown hung up under about 40-70% shade in peak summer(depending on how hot and dry it is) and about 30-50% in winter. Temperatures generally should be in the intermediate range, recommended winter night minimum of 8 degrees C, although some of them from higher elevations or areas such as Mexico are tolerant of cooler conditions provided the roots are kept dry during the critical cold period of winter.

The potting media can be anything from straight *Sphagnam* to straight bark. A general mix would be 90% medium grade bark mixed with 10% charcoal. Good drainage and air movement are very important.



G. galeata 'Semi Concolor'

During the growing season give them plenty of water and weekly 1/4 strength fertilising high in nitrogen and then swap to a bloom booster 1/2 strength every 2 weeks and reduce watering when pseudobulbs have reached maturity (or first signs of any flower stems). This will usually be in the middle to end of summer going into autumn, depending on your growing conditions.

As far South as Sydney you can keep watering them at a reduced rate until the end of June, when you then give them a dry rest of about 4-6 weeks only misting the bulbs and the leaves every 2-3 days depending on the weather. It is also beneficial to give the plants a brief rest after flowering.

It has been reported that bud drop can be a problem during the stages of the buds formation and swelling. Hawkes wrote that reducing water to the roots at this time and placing the plant in a cooler shadier location will help prevent this.

This does seem to work but inconsistent temperatures can reduce the amount of flowers, and the size of the flowers, the raceme will end up producing. In my opinion it is best to be consistent with the method of culture that works for you! But good air movement and humidity are essential.

Late winter to early spring you should start to see the first racemes forming from the base of the pseudobulbs on a wide range of different species but a couple would be *Gongora bufonia* Lindley. *Gongora grossa* Rchb.f. and *Gongora truncata*. A lot of Gongoras will flower a couple of times a year, and if you are lucky enough to have a plant of the very rare *Gongora maculata* Lindley. and keep it warmish in winter you can have flowers at any time of the year. A good collection of *Gongora* will give you flowers intermittently all year.



G. galeata 'Concolor'

The majority of *Gongora* flowers are highly variable in colour and often short lived, 7-14 days but there are species such as *G. portentosa* Linden & Rchb.f. where the flowers can last as long as 3 weeks provided you hang the plant in the desired conditions.

One thing I have noticed is once the buds open, the flowers will last much longer if the plant is hung in a protected court yard or some where similar, where they can freely relish the night air, compared with being kept consistently in the heated glasshouse.

Recent experiments conducted with five plants of *Gongora truncata*, four kept in the heated house from the first signs of the flower stems being noticeable at the base of the pseudobulb and until the buds finally flowered and demised. The other plant the same culture except, when the flower buds opened it was moved outside into a cooler protected area day and night, with no heat or fans just the fresh night and day air. The flowers on the four plants in the heated house only lasted 7-9 days, where as the plant kept outside the flowers lasted 16 days before starting to drop.

The identification of *Gongora* species must be based solely on structure of the flower and the identification of its natural pollinator. Like the *Stanhopea* many early recordings of new species were based on colour and consequently plants were illegitimately



G. pleiochroma

named, and so the confusion starts.

As we flower more *Gongora* species plants and have them correctly identified, from time to time we will keep the readers up to date with new findings on culture and morphology. But please beware of so called experts and false prophets who will claim two species are one in the same etc etc e.g. *Gongora bufonia* and *G. leucochila* are not the same species as will be demonstrated in a coming article. (In fact *G. aromatica* Rchb.f. is structurally so similar and almost identical in its colour regime to *G. bufonia*, that to the unobservant eye you could say they are one in the same, but certainly not with *G. leucochila*). Or those who are selling supposed unidentified species in flask etc based solely on colour from anonymous seed sources, and in particular those nurseries whose majority trade is with major chain stores. They would not know a species orchid if it ran them over.

Some Gongoras tolerant of intermediate to cool growing conditions: (cool growing i.e. bush house conditions coastal Sydney, cool glass house Melbourne)

Gongora aceras, G. armeniarca, G. bufonia, G. cassidea, G. galeata, G. gratulubunda, G. hirtzii, G. maculata,

G. portentosa, G. quinquenervis, G. rufescens, G. scaphephorus.

Some intermediate to warm growing Gongoras:

Gongora amparoana, G. aromatica, G. armeniarca, G. atropurpurea, G. aurantiaca, G. bufonia, G. cassidea var. alba, G. ecornuta, G. gratulunda, G. grossa, G. horichiana, G. leucochila, G. maculata, G. minax, G. nigrita, G. rufescens, G. sanderiana, G. truncata.



G. truncata with buds opening

I would like to thank Dr Rudolf Jenny for his notes and identification of some of these species.

All plants owned, grown and photographed by the author.

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What Orchid Is That? Pridgeon.

Rod Rice M.A.I.H.
P.O. Box 353, Round Corner Dural.
N.S.W. Australia. 2156.



Sarcochilus roseus

Pink Bells

Text and Photography Ian Walters

Pinned in my memory was old Stan's description, "Pink Bells"; he claimed you could see them in flower from the road if you looked carefully. I never did, from the road, but close up, along the fault in the rock face, they were certainly there, little clumps of *Sarcochilus ceciliae*, in flower, glittering pink, their faces upturned as though to catch the sun.

And another vague image, heard second hand, a road worker's "Look what I found"; in his hands old Stan's "Pink Bells", torn from the rock crevice, pillaged, destroyed, a curiosity.

But I was now 100 miles and 30 years from old Stan's cherished colony of *Sarcochilus ceciliae*, in a different place far from human activity, half way up the ravine. The slope was steep, and daunting to a not so brave climber, eyes fixed on the top of the waterfall.

The waterfall was gleaming white and sounded like the chatter of a crowded room. I climbed the steep wall, carefully.

This was my second visit, I had returned to see in flower and photograph plants of *Sarcochilus ceciliae* and what I thought could be *Sarcochilus roseus*. The creek above the falls had rocky outcrops along one bank, canopied rain forest along the other.

On the rocky outcrops, in crevices and crannies, small plants and clumps of *Sarcochilus ceciliae* grew, in the exposed sunlit areas, their leaves reddish from the sun. They clung to crevices, their roots into the cracks and into small tussocks of grass, almost terrestrial.

Under the forest canopy, on the opposite side, this species also grew on top of boulders, out of reach of flooding creek water, their leaves plump and green, but still showing evidence of flower spikes.

Within a few metres, on the edges of the rock outcrops, where the thin grass managed to grow out of reach of both fire and flood, were plants of a *Sarcochilus* with a climbing, elongated appearance. The plants appeared to be growing in the grass, but close examination showed that they were in fact growing in the rock and rub-



Sarcochilus roseus in situ



Dendrobium x *ruppiosum* in situ

ble, and threading their way up through the grass to the sunlight.

Sarcochilus roseus? I had returned to photograph and learn its identity, to put a name to countless baby seedlings in bottles, a seedpod found on the first visit.

The rocky outcrops were steep, and on one broad outcrop, there grew on one side numerous plants of *Dendrobium speciosum*. On the other side of the rock, as though separated by a wide flat wall, were numerous plants of *Dendrobium* x *ruppiosum*, a natural hybrid between *Dendrobium speciosum* and *Dendrobium ruppianum*. Strangely separated, each colony occupied its own territory.

In the tree tops along the creek, we observed a few plants of *Dendrobium ruppianum*, outnumbered by its hybrid children growing in the leaves and rubble in the rock crevices.

And the flowers I had come to photograph? Both colonies of *Sarcochilus* were in fact all the same species, with varying growth habits due to their growing position. Those in the full sunlight were stunted, while those in the grass and shade were forced to elongate in their quest for sunlight.

The bright pink purple to rose coloured flowers were those of the form of *Sarcochilus ceciliae* variously called var *roseus* or *Sarcochilus roseus*. So I found a name for the bottle babys, and a different form to old Stan's "Pink Bells", the original type form.

Ian Walters,
Burleigh Park,
54 Hammond Way,
Thuringowa
Qld, 4817



Sarcochilus ceciliae type form "Cleveland Bay"

Ira Butler Trophy Committee Awards for 1995

by Ruth Rudkin

THE GRAND CHAMPION AUSTRALIAN NATIVE ORCHID HYBRID OF THE YEAR 1995

The winner of THE GOLD IRA BUTLER TROPHY is Bill Kennewell, with *Sarcochilus* Judith 'Snowy'.

The photographic slides provided with this nomination showed the plant and its flowers to perfection. There were four racemes with a total of nearly 60 flowers on a single growth 160 mm high. The flowers were of good texture, in pristine condition, well rounded in outline and flat. The tepals were a pure white, highlighted by a yellow labellum and an unusually dark rachis. The inflorescences were straight and strong, with the flowers in a very regular alternate arrangement.

Sarcochilus Judith 'Snowy' was Champion Australian Native orchid Hybrid at two A.N.O.S. *Sarcanthinae* Shows, Macarthur and then Sydney, and Nominations and slides came from both. The plant had been purchased from Florafest Orchids. *S.* Judith is a hybrid of *S.* Melba x *S.* Fitzhart, first registered by W. Upton in 1992.

This year there were 27 Nominations of which 5 were of plants which had gained Awards. Unfortunately, in some cases the slides provided, were from the organisation giving the awards, rather than from the owner of the plant. The Ira Butler Committee requires 3 slides, whereas for Awards, only two are needed. Although the photography was good in many of the slides, in some cases it was poor, either under or over exposed, or the plant was not shown to its best advantage. Some slides showed plants with damaged leaves, and others merely showed the whole plant at different distances, rather than showing a close-up of a few flowers. Floriferous plants have a clear advantage over a small plant with a few good flowers.

Silver Ira Butler Trophies have been won by the following —

1. State Societies for plants which have been Champion Australian Native Hybrid of their Shows.

O.C.S.A. — Autumn Show — *Dendrobium* Chieno 'Grange', Reg and Gill Shooter.

— Winter Show — *D.* Hilda Poxon, D. and B. James.

— Spring Show — *D.* Elegant Heart 'Blush', B. Mules, Hybridist, B. Mules.

O.S.N.S.W. — Spring Show — *Rhinochilus* Vera 'Mount Colah'. J.K. Irvine, hybridist, J.K. Irvine.

O.S.W.A. — Spectacular, *D.* Red River 'No. 2', F. and H. Vernon, hybridist, Neville Roper.

— Winter Show, *D.* Hilda Poxon 'Dandy', John Fleming, hybridist, N. Grundon.

— Spring Show, *D.* Yondi x *D.* Wonga — F. and H. Patfield — hybridist, Neil Finch.

2. Grand Champion of a Society Affiliated Society.

Mandurah Orchid Society, Spring Show, *D.* Clarrie Wuth 'Ann', Wally Heath, hybridist, Florafest.

Upper Hunter Orchid Society, Spring Show, *D.* Star of Riverdene, Henk van den Berg, hybridist, Sid Batchelor.

3. Australian Native Orchid Champion of an ANOS Council, or Group or Native Orchid Society Show.

Central Coast — Spring Show, *D.* Emma 'Suzy' HCC/ANOS, Henk van den Berg, hybridist, Gordon Young.

Macarthur — Spring Show, *Sarcochilus* Melba, H. and D. Turner, hybridist, Neil Finch.

N.O.S.S.A. — Spring Show, *D.* x delicatum 'Kerry', Bruce Mules.

N.O.S.T.I. — *Sarcanthinae* Show, S. Kelunji 'First Up', Simpson Orchids, hybridist, Simpson Orchids.

Pt. Hacking — Spring Show, *D.* Karsun 'Goldie', N. Roper, hybridist Col Brandon.

— *Sarcanthinae* Show, *S.* Melody 'Red Edge', Dennis Wood, hybridist Kevin Wilson.



Gold Ira Butler trophy winner, *Sarc.* Judith 'Snowy' – W.J. Kennewell

Sydney — Spring Show, *D.* Yondi Tina 'Goliath', Bernie Fletcher, hybridist, Sid Batchelor.

Warringah — Spring Show, *Cymbidium* Little Black Sambo, John Roberts.

W.A. — Spring Show, *D.* Kathryn Banks 'Jen' x *D. falcorostrum* No. 1, Richard Winch, Hybridist, Sid Batchelor.

Wollongong & D.N.O.S. — Spring Show, *D.* Star of Riverdene, Bruce Porter, hybridist Sid Batchelor.

— *Sarcanthinae* Show, *S.* (Melody x *fitzgeraldii*) x *S. hartmannii*, A. and T. King, hybridist Ken Russell.

The following Awarded Plants were nominated but were not Show Champions and therefore do not get a Silver Trophy.

A.N.O.S. (NSW) — *D.* Yondi Brolga 'Yondi' HCC/ANOS, H. van den Berg, hybridist Sid Batchelor.

N.O.S.T.I. — *S.* Weinhart 'Lonesome; HCC/ANOS, Alwyn Fleming.

O.S.N.S.W. — *D.* Tropical Witt 'Freckles' HCC/NSW.

TAS. O.S. — *D.* Miara 'Shirley' HCC/TAS, Gerald and Shirley Knight, hybridist Wal Upton.

All on the Ira Butler Trophy Committee are aware of the difficulties involved in orchid photography, and even more of the problems at Shows. So congratulations to all who sent in Nominations, to the growers, photographers. Show Marshals and Registrars. Special thanks to those who sent in the nominations early so that they could get on "disk" well before the judging.

From the Ira Butler Trophy Committee, Good Growing and Successful Shows in 1996.

CHAMPION AUSTRALIAN NATIVE ORCHID SPECIES OF THE YEAR 1995.

The winners of the BILL MURDOCH TROPHY are M. and J. Fruend with *Dendrobium linguiforme* 'Jean'.

This magnificent specimen plant was not only unusually floriferous but the flowers were of very good quality, as was shown on the slides provided. It was the Grand Champion of the Wangaratta and District Orchid Society's Spring Show held last September. The information given on the Nomination Form was that there were 117 'spikes', and 2106 flowers, and the plant was at its best at the Show.

There were 23 Nominations again this year. Unfortunately the photography in some cases could have been greatly improved. In some slides details of the flowers could not be seen because of over exposure, and in others because they were too dark. *Dendrobium bigibbum* 'Top Hat' was nominated by both the O.S.N.S.W. and A.N.O.S. In future the Nomination Form for a plant which has won an Award, must be accompanied by 3 slides which remain the property of the Ira Butler Committee. they may not be slides which were sent for the Award because these are the property of the awarding body.



Bill Murdoch trophy winner, *Den. linguiforme* 'Jean' – M. and J. Freund.

Some of the line bred plants were rather small, but individual flowers showed that they could be potential Show winners. In some cases good specimen plants did not have outstanding flowers. The Champion should preferably be well flowered on a quality plant with quality flowers and photographed to perfection.

There is only one Bill Murdoch Trophy given each year. The following is a list of plants that were nominated —

1. From State Orchid Societies, the Champion Australian Native Species

O.C.S.A. — Autumn Show — *Pterostylis dolichochila*. Winsome and Les McHugh.

— Winter Show — *P. cutra*. Peter Speer.

— Spring Show — *Dendrobium speciosum* 'Yondi', Bruce Mules.

O.S.N.S.W. — Spring Show — *Cymbidium canaliculatum*. Trevor and Pauline Onslow.

O.S.W.A. — Spectacular — *P.* aff. *nana*. P. Bunney.

— Winter Show — *P. ophioglossa*. Ross and Margaret Wilton.

— Spring Show — *Caladenia longicauda*. Rodney Steer.

TAS. O.S. — Spring Show — *Sarcochilus falcatus* 'Snowdrift', David and Coralie Best.

2. State Affiliated Society, Grand champion of the Show

Stawell Orchid Society — Spring Show — *D. speciosum*. L. and N. Crawford.

Dungog Show — *D. bigibbum* 'Top Hat' AM/ANOS, HCC/NSW. Henk van den Berg.

Mandurah O.S. — Spring Show — *D. jonesii*. Ken Gorey.

3. A.N.O.S. Groups or Native Orchid Societies, Champion Australian Native Orchid Species

Macarthur & D. Group — Spring Show — *D. kingianum* 'Elderslie'. Norm Biffin — Line bred by Sid Batchelor.

N.O.S.S.A. — Spring Show — *D. speciosum* var. *grandiflorum*. Peter Barnes. Line bred by Arambeen Orchids.

Pt. Hacking Group — Spring Show — *D. speciosum* 'National White'. Col. Brandon.

— *Sarcanthinae* Show — *Sarc. hartmannii* 'BK' x 'Red Snow'. Col. Brandon. Line bred by Ken Russell.

Sydney Group — Spring Show — *Caladenia eminens*. Doug. Binns.

— *Sarcanthinae* Show — *S. falcatus*. Gerry Walsh.

Warringah Group — Spring Show — *D. speciosum* var. *speciosum*. Chris. Arnott.

ANOS W.A. — Spring Show — *D. aemulum*. Rod Bitton.

Wollongong & D.N.O.S. — Spring Show — *D. striolatum*. B. and H. Morton.

— *Sarcanthinae* Show — *S. hartmannii* 'B.K. Yondi' x *S. hartmannii* N.V. Red Snow HCC'. Alan Stephenson. Line bred by Neil Finch.

Of the 23 plants nominated, 5 were line bred, and one had two Awards. 11 plants were from State Societies or Affiliates, while 10 were from ANOS or other Native Orchid Societies. Congratulations to all the growers, their Societies, Judges and Show Marshals. And thanks to the photographers, without whom there would have been no competition.

Good growing everybody, from

Ruth Rudkin
The Ira Butler Trophy Committee.
Ruth Rudkin, Hon. Secretary.

An Adelaide Adventure

by D.R. Acula

Early publicity indicated that The Spring Show of The Orchid Club of South Australia Inc. would be held in conjunction with the Spring Show of the Royal Agricultural Society of South Australia in late August in Adelaide.

After obtaining permission from "The Boss", your writer contacted The Registrar, Richard Fishlock investigating the possibility of being appointed to a Judging Panel at the Show, an affirmative reply saw arrangements made to travel to Adelaide to coincide with the Show set up day Wednesday the 30th August, 1995.

Leaving home full of great expectations, the first blow fell, as the aircraft was out of service and yours truly and also other Adelaide travellers concerned were re-booked via Melbourne.

A quick goodbye to the wife and your scribe was off upstairs to the service desk to complete the necessary formalities.

Cutting short the mundane details, your writer finally arrived in Adelaide after a journey of almost four hours duration. Booking in at the Grosvenor Hotel, known for its old world charm, a quick unpack, then an eager traveller headed to the Wayville Show Ground, some two kms., south of the hotel.

A feature of the Show Ground is the huge Centennial Hall, the venue of the Show. O.C.S.A. had been allocated perhaps a fifth of the vast floor area.

At 4.00 p.m. the scene was more or less organised chaos, with some displays completed, whilst others had not been started.

A quick word with secretary Sally White indicated that all was well, as the deadline for finishing was 10 p.m.

The Show theme was "Orchids around the World", and your writer has never seen so many "Globes of the World" at one time ever before.

Basically the Show format was outlined with hundreds of new house bricks with peninsulars and wider areas giving a neat perspective to the Show. A feature of the Show was a number of "Table top" displays utilised. Some six feet (I am an Oldie) in diameter with an 8 inch lip, these Table Tops were a most interesting aspect of The Show, as many smaller plants were brought up to eye level for viewing.

Whilst surveying the incomplete Show set up, Don Gallagher was noticed adding the finishing touches to his Display, utilising Travel Posters and various associated "props".

Back to The Grosvenor Hotel for an early night as an early start was scheduled for the morning, with judging to commence at 8 a.m.

After a quick breakfast off again to the Show where I was introduced by the Registrar, who had kindly added my name to a Panel led by Roger Stoekel.



Grand Champion O.C.S.A. Spring Show. *Cym.* (James Wattie x Yowie Flame). Owned by John and Mary Harris.

One must mention the extensive organising of the Judging Panel as a vast array of plants had to be considered, despite the necessity of being nominated for consideration. Although numerous Panels were involved, the Show was judged, the Champions selected and an Award Judging of two *Phalaenopsis* concluded at two forty-five in the afternoon. A long day on the floor indeed.

Mention must be made of the Prize Card production System which involved two Computer and printer systems, each system processing First and Second Prize Cards respectively. A change over was made for The Champions and Special Prizes. The Cards were linked together in rolls and were separated later, placed in a plastic bag and heat sealed to prevent water damage.

O.C.S.A. has a different system of exhibitors with the various growers being able to exhibit in Open Division, First Division or Second Division, as their expertise developed.

Your writer thoroughly enjoyed his Adelaide Trip, new friendships were made, the other side of judging experienced and a camaraderie established with O.C.S.A. Judges.

A highlight of the Trip was an invitation by the Registrar to yours truly, to submit Award Cards for The Award Judging.

A very happy result of the trip was an invitation to return for The 1996 Spring Show Judging. Thank you one and all for your friendship and hospitality.

Some of the major Prize Winners were as follows:-

Grand Champion, Champion Open Division, Champion Standard *Cymbidium* and Advertiser Tray, *Cymbidium* (James Wattie x Yowie Flame) shown by John and Mary Harris, (not the well known Secretary to the A.O.C.), this plant was notable for the small stakes and one tie used to support the large flower spikes, an example of how to stake and present Cymbidiums. Champion First Division was a fine flowering of *Cymbidium* Sarah Jean 'Vapour' exhibited by Maurice Martin. Second Division Champion was *Dendrobium nobile* exhibited by Don and Barbara James. A well flowered plant, but surely this was a *D.* Nolan as the plant had all the features of this 1960 variety. This plant was also Champion *Dendrobium*.

The Champion *Cattleya* Class was won by *Blc.* Dream Trader 'Ray' shown by Rob Worden, a very attractive Orchid. Alan and Doreen Garner staged *Dendrochilum filiforme* 'Golden Charm' to win The Champion any other Genus Class.

Champion *Paphiopedilum* was a splendid variety of *P. sukhakulii* display by Johnson Orchids. A very fine form indeed.

Champion Display of Three Cymbidiums for colour was presented by Murray Weston including (Mimi x Lois Graves) + (Amesbury x Borough Green) + One Tree Hill. A pity this Class is no longer found in our Sydney Schedules.

Well done O.C.S.A.

D.R. Acula

Five Dock

Coffs Harbour City Orchid Festival

presented by Coffs Harbour Orchid Society Inc.



Display of Odontoglossums and Masdevallias by Warrnabool Orchids – *Photo: P. Edwards.*

As good a display of orchids as I have ever seen" — High praise indeed from the indomitable Gerald McCraith, A.M. Gerald has been fortunate enough to attend not only every World Orchid Conference since 1962, but also hundreds, if not thousands, of orchid shows throughout Australia and the World. No one could be more qualified to lavish praise upon an event and that's exactly what he said during a conversation with Philip Altmann on the return flight from the Coffs Harbour Festival. Both Gerald and Philip agreed that it was the overall high quality of the plants in the displays that was so impressive and one had to look very hard to find a plant that did not show excellent culture and of course a corresponding flowering.

The festival comprised of 10 societies which included Tweed District, Woodburn, Maclean, Woolgoolga, Coffs Harbour, Nambucca, Macleay Valley, Manning River, Port Macquarie and Camden Haven, as well as displays by Robertson Orchids, Stuart Heyden, Bannacoast Orchids, and Harbour Hybrids. There were also several table top displays by individual growers. The event was held in the newly completed and fully carpeted "Norm Jordan Pavilion" at Coffs Harbour Showgrounds, which proved to be a wonderful setting for a most spectacular festival.

Thirty plus Judges and several associates took nearly the full day to select their winner and once again, as in 1992, Warrnambool Orchids took the Grand Champion prize with a magnificent '*Oda,* Murray River'. Reserve Champion went to Brian and Ann Cullen of Tweed District Society with *'Amesiella philippensis'* also a magnificent specimen. The Champion display was also a repeat performance of 1992 — Tweed District Orchid Society put on an absolutely outstanding display that not only won them prize winners there were several sectional champions and of course the Reserve Grand Champion. Tweed members certainly know how to put on a display.

Reserve Champion Display went to Manning River Orchid Society. Their effort was not far behind Tweed and certainly contained some magnificent plants including the Sectional Champion *Cymbidium.* 3rd placing went to Port Macquarie Orchid Society.

All the different society members had put in an enormous effort to make the display one of the best. Their stands were a credit to them all.

The $1,000 prize for Grand Champion was donated by Debco and Coffs Harbour Orchid Society, whilst the $500 Reserve Champion prize was donated by Woolgoolga Orchid Society. $1,000 was also the prize for Champion display and this was donated by Polwood Aussie Bark, Port Macquarie Injection Moulding and Red Lion Laundry, Coffs Harbour. Reserve Champion display was $500 donated by Mobil Aust. Ltd.

Our major sponsor for the Festival which was known as the Metway/Prime Television Coffs Harbour Orchid Festival included Prime T.V. who generously gave over $6,000 worth of Television advertising, also news items, and a feature segment, all in principal viewing times. Metway Bank, Mobil Aust. Debco, Polwood Aussie Bark, Woolgoolga Orchid Society all of whom gave $500. Ansett Australia gave $1,200 worth of air travel for our 2 Victorian guests and Pacific Towers Resort at Coffs Harbour $1,000 worth of free accommodation.

Without the help of these very fine Australian Companies, orchid promotion would not be as possible to achieve and our sincere thanks to all these people.

We have a supply of '95 festival badges for sale as well as the '92 badges. Cost is $10 for both or $5 each including postage.

We have also had a video of the festival done by a commercial photographer. This is a very good production and gives an excellent overview of the set of the hall as well as set up by each society and the table top displays put on by individual growers. Also close ups of most of the outstanding orchids from the displays. Cost of this video is $30 and this includes postage. The video is highly recommended by the Society.

I have mentioned the Grand Champion and Reserve Champion. These were selected from all the sectional champions which were all of superb quality. The *Dendrobium* Hybrid Champion went to Ron Bailey (Tweed District) with *Dendrobium gouldii* x Taurinium a most worthy winner.

Stuart Heyden won the *Paph.* section with a magnificent plant *Paph.* St. Swithin's "Queenslander". This plant was very well displayed and one of the most admired and talked about exhibits on display.

Doug Grant a well known Port Macquarie grower won the Australian Native Section with his hybrid with *Den. tetragonum* in breeding with *Den.* Marie - also well displayed and an excellent choice.

The hybrid section was a well flowered outstanding cross of *Cym.* Borough Green Conference x *Cym.* Fanfare St. Francis owned by Peter Grady from Manning River Society.

Noel Heyden was once again in the winners circle with the Champion *Phalaenopsis* Tropic Shower x Bridesmaid Purity x Antartic Blanchmerne a magnificent exhibition type - white. Noel also won the Vandaceous section with *Opst.* Suree x Sees.

John Lamotte of Manning River Society had an excellent well displayed faultless *Cattleya* - Sylvia Fry 'Supreme'.

The miscellaneous hybrid sectional champion was *Masd.* Kimballiana 'Hawk Hill' owned by the winner of Grand Champion prize, Phillip Altmann, Warrnambool Orchids.

Coffs Harbour Society wishes to thank all the participating societies, those commercial growers who attended, and our guest speakers, many of whom travelled long distances to help make the show.

I also thank all the members of Coffs Harbour and Woolgoolga Orchid Societies for their untiring efforts in setting up, helping to conduct and dismantling the Show. ■

Peter Edwards
Co-ordinator/Secretary

1995 "Town & Country" Show

The Royal Melbourne Showgrounds was the venue of the 1995 "Town & Country" Show conducted by the Victorian Orchid Club in conjunction with Affiliated Societies.

Members from many Societies, from Junior to very experienced growers, participated enthusiastically in the exhibition. They provided a magnificent array of a great variety of genera — there was certainly something to interest everyone who visited the Show.

There were 17 displays staged, ranging from table-top displays by individual growers to enormous exhibits by Societies; many hours of effort on set-up day was rewarded with an overall spectacular exhibition which included some very artistic displays. Some Societies travelled great distances to participate, and all displays by Affiliated Societies were a credit to their members, particularly those who volunteered to set-up the displays. Albury-Wodonga & District Orchid Club, Dandenong & District Orchid Club, Stawell Orchid Society and Wangaratta & District Orchid Society all staged very pleasing displays, whilst Maribyrnong Orchid Society and Warringal Orchid Society staged enormous lavish displays.

The Champion Display of the Show was won by the Stawell Orchid Society — this stand was also judged the Best Display by an Affiliated Society. Stawell Orchid Society is a relatively young Club, and this was the first time that they had participated in this annual event. Their display contained a variety of quality plants, displayed to advantage, and their ingenious theme and attention to detail in finishing off was certainly a credit to them.

The Pre-Eminent Entry of the Show was awarded to Lorraine Mercer for her outstanding display, which was also judged the Best Artistic Display. Lorraine's stand contained a wonderful array of lovely plants, and as usual was finished beautifully.



Champion Display went to the Stawell Orchid Society.

The Champion Orchid of the Show was won by a most appealing *Paph. delenatii* grown and exhibited by Eric and Frances Wilde from the Maribyrnong Orchid Society.

The Reserve Champion Orchid of the Show, exhibited by John and Barbara Welsh from the Stawell Orchid Society, was a very lovely plant of *Cym.* Jubilation 'Geronimo'.

There was a wonderful assortment of Australian Natives on display: Champion Australian Native Species was won by *Sarc. hartmannii*, owned by Joe Crawford. An appealing plant which was also judged the Best Australian Native Seedling Flowering for the First Time. Champion Australian Native Hybrid was won by a lovely *Den.* Ruppiosum, shown by Kevin Carter. Both these Natives were relatively small plants, so we can look forward to magnificent shows once they mature into large plants.

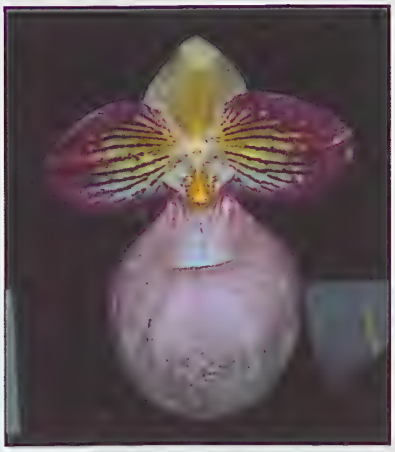
The variety and quality of orchids exhibited by the Junior growers was certainly encouraging — these growers are our future, and going by their efforts at this Show, the future of orchids is in good hands!

This annual event has proven to be a weekend of friendship between city and country orchid enthusiasts, and this year was no exception. The "Town & Country" Show is an event we all enjoy and look forward to each year!

A visit to Bairnsdale and Ballarat Spring Shows

My husband is a judge on the O.S.C.O.V. panel and I try to accompany him to 3 or 4 Victorian country shows each year. This year my visits included Bairnsdale and Ballarat, one at the Eastern end of the state and the other in the middle of the Western district.

The two country towns are hundreds of kilometres apart, but they have something in common, you cannot beat country hospitality. The friendly and generous reception, that we always receive, makes us realise that there is more to orchid growing than just the plants. The friends that we have made over the years, while enjoying our orchid hobby, makes use happy that we caught the orchid bug. To all my friends out there good growing and I will catch up with you at your next show or may be one after that.



Pre Eminent Entry of the BOS show, *Paph. micranthum.* Owner Sheila Horlock.

David thought I had better mention the winners of the shows, so here they are:-

Bairnsdale Orchid Group —

Champion Orchid in Show was *Den.* Gracillimum owned by P & M Lowe

Reserve Champion Orchid in Show was *Cym.* Jubilation 'Geronimo' owned by F & L Harris

Seedling flowering for the first time was a line breed *Sarc. hartmannii* ('Delightful' x 'Kerri'), owned by J & B Grant.

Ballarat Orchid Society —

Champion Orchid in Show was *Miltoniopsis* Lyceana Stamperland owned by J & A Ertherton.

Reserve Champion Orchid of the Show, from the Midlands Orchid Society stand, *Sarc. hartmannii* owned by Howard Foyer.

Pre Eminent Entry of Show, from the Midlands Orchid Society stand, was *Paph. micranthum* owned by Sheila Horloch.

The most artistic display went to Joy Kay 'Orchids are magic featuring the Wicked Witch of the West' congratulations Joy.

Congratulations to not only the winning plants, but to everyone who contributed to make both shows a success.

Carol Allen

Southern Suburbs Orchid Society

The Show Committee formed by the Southern Suburbs Orchid Society saw its well organised plans come alive on Friday 8th September when a large variety of plants arrived for their Annual Spring Show.

It did not take long, but much effort was put into dressing up the hall for the occasion. Stands were set up around the perimeter of the hall, with a centre stand displaying plants of many different genera contributed by club members.

When the Show opened on Saturday 9th and continued on Sunday 10th, visitors were treated to an excellent display of orchids, once again produced under the "difficult" conditions which have prevailed during the season.

At one end of the hall there was a stand completely filled with Australian Natives featuring mainly Dendrobiums, but several other genera were present. Notably was a large *Den. speciosum,* probably needing a truck to bring it.

One of the first individual stands to be noticed was Max Akam's which featured Pleiones, which Max grows to perfection. His stand gained a Bronze Award. Gerry Schaak's stand had a fine showing of various Cymbidiums, his efforts also being rewarded with a Bronze Award.

Bob Evans' stand featured some of his speciality, green Cymbidiums, and this also gained a Bronze Award. Next along was the Pearce's stand, and as usual Elaine and Vic showed that they can produce a wide range of genera. They were awarded a Silver for this showing.

The team effort which contributed the



Champion Stand Gold Award featuring Vandas and Phalaenopsis, went to Gwen and Marian.

next stand gained a Silver Award, two of the plants used Sarah Jeans, Vapour which was judged as Champion *Cymbidium* grown by Dawn LaBrooy and also Dawn's *Cym.* Ice Cascades being outstanding. Special interest was attracted to a *Pleione formosana* on an old horse cart as a novel effect.

The Mornington Peninsula Orchid Society Members who also are Southern Suburbs Members were awarded a Bronze for their display of many different orchids on their stand, noted among their plants was a beautiful *Paphiopedilum insigne.* They also were rewarded with a Bronze Award.

Ern Kettle demonstrated that he could grow orchids extremely well, his stand showed some excellent samples of this, his *Cym.* Leopard Lady 'Mary Smith' being judged as Reserve Champion *Cymbidium,* an Award of Excellence for the Best Seedling *Cymbidium, Cym.* Chocolate 'Toffee', and his stand gained him a Silver Award.

Brian Forsyth showed some unusual orchids on his stand which also gained a Bronze Award. Two of the plants, *Cym.* Mini Beacon 'Red Torch' and *Cym. grandiflorum* attracting special attention.

As is becoming expected perhaps, Gwen and Marian Podolski won the Gold Award for their stand featuring Vandas and *Phalaenopsis.* They always put together an outstanding display, and this was certainly up to standard.

The central stand showed many different genera, plants such as some *Dendrobium* hybrids, a basket of Paphs, various Cattleyas and Cymbidiums contributed by many members.

A display of Floral Art on the stage attracted a lot of attention, particularly that of the ladies who visited the Show.

Many visitors found just what they wanted on the sales bench, and took home some well grown plants to add to or start their collection.

The President, Vic Pearce presented the Awards and Trophies at the conclusion of the Show and congratulated the winners and passed special thanks to Brian Forsyth and the Show Committee as well as to all others who contributed to making the event such an outstanding success.

Trophy Winners

Presidents Trophy — Pre Eminent Entry: D. Allen — *P. insigne*

Silver Goblet — Champion Orchid Other Than Cymbidium: F. Helle — *Den. aemulum*

OSCOV Medal — Champion Cymbidium: D. Labrody — *Cym.* Sarah Jean, Vapour

Crystal Vase — Reserve Champion Cymbidium: E. Kettle — *Cym.* Leopard Lady, Mary Smith

ANOS Medal — Best Aust. Native Hybrid: K. Conroy — *Den.* Kathryn Banks x Peach Glow

Gerry Schaak Perpetual Trophy: Best Aust. Native Species: F. Helle *Den. aemulum.*

John Schleifert
Kevin Johnson

Eurobodalla Orchid Club

We held our inaugural show on 1st and 2nd of September 1995, and as we are a very new club (about 2 years) we feel that we are doing well. We meet every 2nd Wednesday of the month at the United church hall, Page Street, Moruya, where new members and visitors are always welcome. So far we have about 50 members (80% approx. novice growers).

Our novice growers at the show made us very proud, we had 205 entries and 70 of them were novices, including one couple,



John Mackay holding his *Phal. schilleriana,* Grand Champion of the show.

John and Robin Mackay from Narooma, who was Champion Novice, then Grand champion orchid took out with a very lovely *Phalaenopsis schilleriana.* Well done.

One way or another, all members did a great job and can be proud of a very successful show.

We would also like to say a big thank you to our three judges — Norma Stafford, Dennis Diehm and Ted Beehag — THANK YOU.

Kay Brand,
Bodalla NSW 2545

The Murray Bridge and districts Orchid Club Inc.

On Friday and Saturday, 30th June and 1st July, we conducted a successful Winter Show in the John Dohler Hall. Visiting Guest AOC Judges, Murray Weston and Ken Minney were assisted by local AOC Judges, Bertie Bower and John Gay.

Champion Second Division award went to Ed. and Dorothy Presser with *Cym.* Morialta 'Morialta Falls', which had also taken first placing for Best Miniature Cymbidium, Best Decorative any Genus, and Best Specimen any Genus.

Other results in Second Division included Standard Cymbidium — *Cym.* Kybybolite 'Pink Gem', owned by Alan and Pauline Bull, whilst the Intermediate *Cymbidium* was *Cym.* (Ovation x Peter Pan), owned by Junior Member, Jodie Zerna.

Andrew and Michelle Wohlfeil won Best *Paphiopedilum* with *Paph.* Crossianum 'Album', Best Species with *Mediocalcar decoratum,* and Best any other genera with *Masdevallia* Oriole.

Paul and Wendy Schmerl won Best Cattleya Alliance with *Laelia anceps* 'Garnet', Best Australian Native Terrestrial,

with *Pterostylis* Rogoff. Ed and Dorothy Presser also won the Best Australian Native Epiphyte with *Den.* Hilda Poxon.

In First Division the Champion plant was *Potinara* (*Blc.* Victor Umi Pettier 'Moonlight Madness' x *Slc.* Paprika 'Miller Yellow'). This magnificent plant of deep lavender coloured blooms was a real eye-catcher, and won the Best *Cattleya* Alliance award, for Gordon and Mauya Wehrmann. Gordon and Mauya also won the Best any other genus prize with *Oncidium* Sultamyre 'Therese'.

Rosalie Moore received Best Standard *Cymbidium* with *Cym.* Arcadian Sunrise 'Golden Fleece', Ken and Ann Carter's *Cym.* Red Baker 'Mischief' won best Intermediate *Cymbidium*, and Ern Kenney's *Cym.* Morialta 'Morialta Falls' was awarded Best Miniature.

Bob and Heather Rice's gloriously immaculate *Cym.* Melanie received Best Specimen any genus award, and Henry and Betty Lawson won the Vintage Standard Cymbidium (registered in 1954 or earlier) with *Cym.* Grand Monarch, 'Exquisite'.

John and Beverley were successful in winning the Best *Paphiopedilum* (*Paph. villosum*), Aust. Native Epiphyte (*Den.* Aussie Child), Aust. Native Terrestrial (*Ptst. sanguinea*), Best Species (*Paph. villosum*), and Best Decorative any genera (*Cym.* Luana 'Pink Champagne').

* * *

Our Spring Show was held on Friday and Saturday 15th and 16th September, at the same venue when a most successful show resulted. Guest AOC Judges were Gordon Hewitt and Kevin Gurney, with local Judges Bertie Bower and John Gay.

Grand Champion of the Show was awarded to Bob and Audrey Harris's *Paph. insigne* var. *sanderae*, which also took out the awards for Champion First Division, *Paphiopedilum* species, and Specimen any Genus.

Bob and Audrey also received awards for the Best *Cattleya* Alliance (*Cattleya* Chocolate Drop 'Kodama'), Aust. Native Epiphyte (*Den. speciosum*), *Zygopetalum* (*Z. intermedium*), Any Other Genus {*Odontocidium* [(Pentland x Liangera) x Lovely Morning]}, and Species any Genera (*Den. speciosum*).

Ken and Ann Carter were successful with Intermediate *Cymbidium* (*Cym.* Rocky Point 'Maria') and Mini. *Cymbidium* (*Cym.* Mini Mint 'Maxine') which also won the Best Yellow/Green; Any other Colour Cym. and Best Hanging Basket with *Cym.* Bulbarrow 'Friar Tuck'.

Bob and Heather Rice's Standard *Cymbidium* (*Cym.* Alvin Bryant x Fanfare) won that award and the Best White/Cream Cym.

Ian MacDonald received the Best Aust. Native Terrestrial award with *Phaius tankervilleae* and First Flowering Seedling any Genus with *Den.* Waringah.

Species *Cym. hookerianum* won that class for Henry and Betty Lawson, whilst Rex and Myra Carter won the Best Pink/Red *Cymbidium.* with *Cym.* Ruby Eyes 'Red Baron'.

John and Beverley Gay were successful in winning the Best Pure Colour *Cymbidium* with *Cym.* Wakakusa 'N.B.', *Paphiopedilum* hybrid (with *Paph. Chouvetii* 'Alix Ann') and Decorative any genera with *Cym.* Geraint 'Malibu'.

Second Division Champion was won by Ed and Dorothy Presser with a lovely clean and appealing plant of *Cym.* Mini Dream. This plant also won Best Intermediate *Cymbidium*, Decorative any Genus and Specimen any Genus. they also won the Best Any other Colour *Cymbidium* (*Cym.* Pumisan x Volcano); Std. *Cymbidium* (Chocolada), Pink/Red *Cymbidium* (*Cym.* Willunga Magic 'It's Magic'), and White/Cream *Cymbidium* (*Cym.* Sarah Jean 'Vapour'), and Species *Cymbidium* with *Cym. tracyanum.*

Paul and Wendy Schmerl were the successful winners with Species any Genus (*Den. speciosum*), First Flowering Seedling any genus [*Paph.* (Indian Ocean x Mahaska)], species any genus (*Den. speciosum*).

Alan and Pauline won the Miniature *Cymbidium* award (name unknown) {birds took the label}, and Any other genera (*Bletilla striata*).

Russell and Jean Whittaker won Pure Colour *Cymbidium* with *Cym.* Second Renaissance 'Jenny Wren', Bertie Bower won *Paphiopedilum* hybrid class with *Paph.* Chouvetii'.

Peter King and Avis Banks were successful in the *Cattleya* Alliance (*Blc.* Fiesta Girl), and Dianne James received Best Aust. Native Terrestrial award (*Caladenia latifolia*).

The Harry and Thoral Tormet encouragement award — for first time Spring Show Exhibitor was won by Wilma Hollamby, and the Junior member class for any genus was won by Angela Groves (*Thelymitra antennifera*).

The Murray Bridge A and H Society was Judged by AOC Judge, Mrs. Brenda Lynch and the Champion of the Show was *Paph. insigne* var. *sanderae* exhibited by Bob and Audrey Harris. Best Aust. Native Orchid went to *Den. kingianum* 'Lipstick' x 'Gloucester' for Henry and Betty Lawson, and the Aggregate was won by John and Beverley Gay.

Beverley H Gay (Mrs)
Murray Bridge and Districts Orchid Club Inc.

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Victoria's International Garden Fair

The inaugural Victoria's International Garden Fair was staged from the 26th October to 29th October, on 4 hectares of magnificent indoor and outdoor exhibition facilities, at the Caulfield race course.

The Fair was sponsored by Channel 7, Radio 3AW, The Herald Sun and Spotless Services Limited and was part of the 1995 Victorian Spring Racing Carnival. The event provided an opportunity to promote the Garden State image of Victoria.

The Orchid Societies Council of Victoria inc. (O.S.C.O.V.) was asked to participate in the Societies section of the fair. A large number of Garden Clubs,



Winner of the Silver Medal, the Floral Art Society of Victoria.

Group and specialist horticultural Societies were also asked to take part in this high calibre event. O.S.C.O.V. was awarded a Bronze Medal for their display, other winners in the societies section were: Bronze Medals also went to The Rose Society and The Camelia Society with a Silver Medal being awarded to the Floral Art Society of Victoria. There was no Gold Medal awarded in the society section of judging.

The Garden Fair presented the best of Victoria's horticulture, floriculture and associated industries to a garden loving nation and international audience. It was one of Australia's major horticultural events of 1995, giving visitors a unique opportunity to view and partake in new experiences in horticultural visual, outdoor living, landscape design, lecture and advice and floral displays.

If you ever visit Victoria at the end of October and are involved in horticulture in any way, you must take the time to visit this truly inspirational Garden Fair.

David Allen

Melbourne Eastern Orchid Society

Isn't it amazing how quickly Spring comes around again. And with it the Spring Shows. Melbourne Eastern Orchid Society held this years at the Waverley Secondary College. The DEBCO Champion Orchid of the Show was *Cymbidium* Jubilation 'Geronimo', as fine an example of this famous orchid as you will see, presented by Peter Sunderland of Kimberley Orchids. He was also fortunate enough to win the Johnston Collection Reserve Champion with a similar plant. Our much sought after Jim Rentoul Trophy for Species plants, went to *Angraceum sesquipedale*, exhibited by Kantu Rama.

Although we had fewer stands this year, they were all of a high quality with the Gold Award for Non-Commercial Stands going to B. & D. Noble, and Silver Awards to E. & V. Pierce M. & G. Podolski and B. & P. Nitz. The floral art section although small was competitive again with the Champion Flower Arrangement being awarded to P. Nitz.

One plant was bypassed by our OSCOV judges, but after some thought and discussion with the Judging Panel, a special President's Award was given to a fine large example of *Dendrobium* Delicatum by Andrew Leamon, The Orchid Gardener. Just shows what good growing over many years can do to a good Australian native.

Probably the most impressive display of standard Cymbidiums seen for some time was the stand by Peter Sunderland. At this time I would suggest that he is the bench-



Jim Rentoul Trophy winner, *angraceum sesquipedale*. Owner Kantu Ramal – *Photo: Bryan Nitz.*

mark grower in this class in Melbourne and probably Victoria. Well done Peter and when do I get my piece of Green Glass?

Now into the planning for next years spring show.

Bryan Nitz
President

Mornington Peninsula Orchid Society Inc.

The M.P.O.S. Inc. again staged a successful Spring Show at The Karingal Hub Shopping complex.

The Show was officially opened on Tuesday 10th October by T.V. and Radio personality Jane Edmanson. A large crowd quickly gathered in the centre to hear Jane



Grand Champion of Show, *Den.* x Delicatum 'Cathie'. Owner Jan and Andy Leamon.

open the Show and to present orchids to the lucky winners of the free raffle.

It was agreed that the quantity was a little down on previous years, but the quality was very high. Plants sold well on the sales table and a lot of useful information, on orchid culture, was given to eager shoppers wanting to know "why didn't my orchid flower".

Grand Champion of the show went to a

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Featuring phalaenopsis Les Orchidees de Michel Vacherot, France. Earlier imports have flowered! We are impressed with spots in pink and yellow in particular. Some material of nfs and flowering size still available $15 — $28. S.A.E. for list.

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Yellow spots and bars

P219 *Phal.* Golden Buddha 'Brother' x Hausermann's Candy York. Yellow background with candy stripe.

P222 *Phal.* Atien Nasu 'Fong Ping #1' x Taipei Gold 'Gold Star'. Exhibition white with clear yellow.

P223 *Phal.* Taiwan Golden Glow x *Phal. ambionensis* 'Yellow'. Yellow with spots and yellow species.

P224 *Phal.* Hausemann's Golden Cup x Mambo 'Fong Ping #1'. Good shape yellow x multi mini type yellow.

P225 *Phal.* Fortune Buddha 'KHS 3' x Taipei Gold 'Gold Star'. Heavy substance yellow/red x clear yellow.

P226 *Phal.* Hsien Ying Spot 'F.P.'s Golden Spots x Mambo 'Fong Ping #1'. Heavy substance yellow x multi flowered yellow.

P265 *Phal.* Golden Buddha 'Brother' x Brother Ann 'Golden Leopard'. Yellow with orange to red spots.

Pink

P221 *Phal.* Rothschildiana (*amabilis* var. *formosana* 'Ching Reuy' x *schilleriana*). Multi flower light pink.

Candy Stripes

P235 *Phal.* Chih Shiang's Stripes 'Fong Ping' x *Dtps.* Ruey Lih Stripe – King Shiang Rose. Purple background candy x dark purple candy.

P236 *Phal.* Chih Shiang's 'Fong Ping' x *Dtps.* King Shiang Coral. Purple candy stripes.

P270 *Phal.* Mary Stripes 'RL' x Chih Shiang's Stripes 'Fong Ping'. Purple background candy.

P271 *Phal.* Classic Carmela – Kathleen A1 x Chih Shiang's Stripes 'Fong Ping'. Candy in dark purple.

P272 *Phal.* Chih Shiang's Stripes 'Fong Ping' x *Dtps.* Ruey Lih Stripe – King Shiang Rose. Purple/candy.

P274 Phal. Little Kathleen x Matou Freed – Zuma Artistry 'Fong Ping'. Mini multi flower candy.

Other

P220 *Phal.* Zuma Garnett, good shape orange x red FCC.

P240 *Phal.* Happy Angel x *Dtps.* King Shiang's Coral, has good shape with purple background.

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magnificent specimen plant of *Den.* Deicatum 'Cathie' owned by Jan and Andy Leamon. this plant also won the Jim Rentoul Trophy for the best specimen orchid of the Show and Champion Orchid by an open grower. The Leamons' did it again with the Reserve Champion Orchid, *Den. kingianum* 'Lindsay', another fine specimen Aust. Native.

Other major prize winners were:—

Champion Orchid by an Advanced grower, *Cym. Iowiamun*, by G & R Ingram.

Champion Orchid by a Novice grower, *Cym. devonianum* x Esmerelda, exhibited by P & G Young.

Champion Orchid by a Junior grower, *Dryadella edwallii*, by Brendan Larkin.

All in all, a successful show was staged. The members can be proud of their efforts and the positive response from the general public augurs well for the society's future.

David Allen

Eastern District Orchid Society

Eastern District Orchid Society Inc. held their Spring Show on 16th and 17th of September 1995 at the Wondall Heights State School. The judges picked *Wils.* Kendrick Williams 'Featherhill' owned by S. & W. West as the Champion



Champion of Show, *Wils.* Kendrick Williams 'Featherhill'. Owner S. and W. West

Orchid from over 400 plants tabled. A great variety of genera were tabled making for a wonderful display for the public to enjoy. A big thank you to all the members who tabled plants and helped over the weekend.

Lyn Davidson
Secretary

Yarra Valley Orchid Society Inc.

I had the pleasure of participating, in a small way, in the judging at the Yarra Valley Orchid Society's very successful Spring Show. The show was held in a new venue this year, the Seville Public hall, which proved to be an excellent move, even though the weather did let us down on the Sunday.

They have a very enthusiastic and hard working group of orchid growers, in



Grand Champion, *Sarc.* George Colthup 'Healesville'. Owner T. and M. Elgood.

Y.V.O.S., whose dedication was reflected in the quality and large number of plants on display.

The Grand Champion Orchid of the Show went to *Sarc.* George Colthup 'Healesville' grown by T & M Elgood. This plant was also awarded an HCC/OSCOV a very worthy champion congratulations to the owners.

Well done Yarra Valley for a lovely show, you did yourselves proud.

Ken West
Associate Judge O.S.C.O.V.

4th *Sarcochilus* Festival

Maribyrnong Orchid Society staged their last show for 1995 with their *Sarcochilus* Festival on 11th and 12th November, 1995. This show was open to all orchid growers for competition and we had entries from near and far with over 300 entries in the *Sarcochilus* sections and 350 entries in the general benching, which our Committee thought was very good for this time of the year.

The *Sarcochilus* that won the coveted title of Champion Sarcochilus of Victoria was a *Sarc. hartmannii* 'Sylvan Son' owned by Howard Tozer of Barkers Creek via Castlemaine — it also gained for him a HCC plus Champion species *Sarcochilus.*

Other Champion awards were presented

to *Sarc.* Judith 'Snowball' HCC for Champion Hybrid *Sarcochilus* and Champion specimen went to a *Sarc.* Melba, owners of these two were Eric and Frances Wilde.

A beautiful array of pink won "Best Stand of the Show" for Margo and Jim Lattimore for their display of *Sarc.* Kate and *Sarc.* Wilde Rose — all lovely shades of pink, well grown plants, beautifully presented. Best Seedling *Sarcochilus* went to Bill and Marion Scott for their plant of *Sarc.* Star Struck — this plant had two spikes of lovely bright pink flowers and should make an outstanding specimen in years to come.

In the general benching the Champion Orchid went to *Cymbidium* Cricket 'Millicent' with over 30 spikes of flowers each with 40 plus flowers per spike, this also received Champion *Cymbidium* and Champion Specimen, owner of this was a very proud Bob Crossman.

Reserve Champion Orchid of the Show and Champion *Paphiopedilum* was a *Paph.* Sierra Lace owned by 18 year old Craig Miles.



Champion *Sarcochilus* of Victoria, *Sarc. hartmannii* 'Sylvan Son'. Owner Howard Tozer.

Champion Australian Native was a *Den.* Eureka owned by Peter and Sheryl Adams. Champion species was owned by Jodie Cutajar, a well grown plant of *Lemboglossom stellatum.*

Maribyrnong Orchid Society have a section of Junior members at their shows to exhibit and this time Matthew Sobey of "Skydancers" Castlemaine won the Roy Ritchie Trophy with a *Sarc. hartmannii.*

All in all a great show to end the year on. The Committee are already working on next years Sarcochilus Festival which will be bigger and better than ever. It will be held at the Maribyrnong Community Centre on the second weekend in November.

F.J. Wilde

VALE — Andree Millar

One of the most remarkable women in Papua New Guinea's history died at Clontarf, Queensland, on 5th December 1995 after a long and painful illness. Although Andree had spent far less years in Australia than she did in PNG she gained a high reputation here in her chosen field — orchids and their horticulture. Right up to the end Andree reminisced about the people she knew and loved from her first contact with PNG in 1947 right up to the day she left PNG in 1984. And then she spoke of her new found friends in Australia — too many to mention here. Most people will remember her through her work in the Lae Botanic Gardens and in the National Botanic Gardens in Port Moresby.



Photo: Roy Mackay

Through orchid conferences and congresses in Australia, Andree had made many friends in the Australian orchid world and when she came to live in Australia her friends multiplied. She was in great demand for talks and her frequent articles, particularly those in "Orchids Australia" were eagerly read by members of the orchid societies. She was sought after for her expertise on orchid horticulture and her wonderful articles on people showed just how generous she was to her fellow workers. She would go well out of her way to help those who were genuinely interested in orchids. This was particularly noticeable in her efforts to help younger people.

Andree was indefatigable in her endeavour to give to the people of Papua New Guinea an asset which would be a wonder to them and one which would be given recognition throughout the world — a top class botanic garden including a beautiful native orchid garden. Orchids were Andree's first love in plants. She organised orchid shows and international orchid conferences. she was invited to many overseas orchid conferences and she often took some of her local staff with her so that they could see that the work they did in the gardens back home was exactly the work that was done in overseas gardens. Andree invariably won honours for her displays and for her talks. Her honours were innumerable and they culminated in two honours which she valued above all — the 1975 Independence Medal of PNG and the OBE from the Queen.

Andree was not a person to suffer fools and many people suffered from the lash of her tongue. But the people who knew her well, her real friends, loved her for they knew her worth. While her ire was something to avoid, her wit and laughter were infectious and a delight to hear.

From her early days in Bulolo she had a love and great respect for the people of PNG especially the Luluais and Tul-Tuls of the villages. Andree took great trouble and spent a lot of her own money to help the local people in new ventures. She was very supportive to school children and university students giving many of them casual work at the gardens when she could afford it.

It was her strong belief that Australia and the United Nations did not treat PNG fairly at the time of Independence in 1975. Her love for the people was affronted on many occasions by the injustices she felt were imposed on the people by the politicians and bureaucrats of other nations. These injustices she would refer to as C.D.Ts. and U.N.D.Ts. (Canberra's dirty tricks and United Nations dirty tricks).

Wherever she went on patrols Andree could be found among a crowd of children. She had a wonderful rapport with them and often had them collecting plants for her in the field and they would be rewarded with sweets, a tin of which she always carried with her on patrols.

Andree was such a good person to be with in the field and she was so efficient as a collector and so meticulous with her records that she was called upon frequently to accompany many scientists who were collecting "anything from fishes eyes to hallucinating mushrooms" — her own words.

Andree published a great many articles and several books and booklets. Her last book — a revised and enlarged edition of the Orchids of Papua New Guinea — is expected to be available early in 1996. Besides a regular column in the Post Courier newspaper for several years, Andree had a regular radio programme on gardening on the National Broadcasting Commission radio in PNG.

Andree will be missed and long remembered by a great many people from PNG's top leaders and bureaucrats to business people, gardeners, students and especially by the many villagers who had long contact with her.

A new hybrid orchid was named after her and in remembrance of her contribution to the study of orchids. The orchid world of south Queensland has lost a valued and much admired worker and many orchid society members have personally lost a real friend.

Roy and Margaret Mackay

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

Gala Goes International

Ballina's Gala Orchid Fair remains at the forefront of innovation with the introduction of a "Gala Banquet" to this year's program of events.

Following the success of previous fairs over 20 trade exhibitors will be in attendance and an expanded orchid flower show is to be organised by the Northern Rivers Orchid Species Society.

Highlights of the Banquet are:

1. Mr Ron Maunder of Paradise Orchid Nurseries from New Zealand as the inaugural international keynote speaker who will talk on "New colours in *Dendrobium* Hybrids using other sectional species".

2. Sumptuous fresh local seafood — which still commands a premium price at the Sydney Fish Market.

3. An exclusive opportunity for banquet goers to purchase flasks at the first Australian release of Ron Maunder's intersectional *Dendrobium* hybridising.

The Gala Orchid Fair continues to provide tremendous opportunities for orchid growers who may view and purchase orchids from over 20 attending orchid nurseries who will offer a wide range of species and hybrid orchids from flask to flowering, orchid growing accessories, books etc. ALL in the one location.

The Fair runs for 2 days: Saturday 11th and Sunday 12th May (Mother's Day) 1996 at the Ballina RSL, River Street, Ballina, NSW 2478 with the Gala Banquet in the evening on Saturday.

Ron Maunder will be bringing with him an extensive collection of slides featuring the results of his hybridising work and others from around the world with the *Pedilonum, Oxyglossum* and *Calyptrochilus* subsections of *Dendrobium*. These results are giving a range of big blue, mauve, purple, red, pink, orange and bicolour bell-shaped bunches of flowers which sometimes flower twice yearly and will grow in intermediate growing conditions.

Look for Ron's article for more information and photos in the April 1996 issue of the "Australian Orchid Review".

The Gala Banquet cost is $45.00 per person, prior registrations are essential and can be made by completing the registration form on page 18 of this issue of the Australian Orchid Review. All banquet registrants receive FREE entry to both days of the Gala Orchid Fair. Non registrants entrance fee is $3.00 per person. Visitors to the Fair also have access to all of the facilities at the RSL Club like restaurants, bar facilities etc.

Orchid Societies wishing to travel by coach to the Fair should contact Grant Smith on 066 28 1438 for additional information.

Anyone requiring further details please contact: Grant Smith on 066 28 1438, Fax 066 28 1999 or Murray Shergold on 066 822 635, Fax 066 822 605 or EMAIL to murgold@nor.com.au.

Fraser Coast Orchidfest '96

Hervey Bay Orchid Society Inc. and Maryborough District Orchid Society Inc. have formed an organising committee to stage and host the S.T.O.C.Q. Inc. Fraser Coast Orchidfest '96.

The Orchidfest is to be held on the Queen's Birthday Weekend, 8th, 9th and 10th June, 1996, in the Hibiscus Room, Kondari Resort, Elizabeth Street, Urangan, Hervey Bay.

Admission to the show will be $2.00 (Registrants Free). An area will be allocated for Commercial Displays and Plant Sales and also a commemorative badge will be on sale. There will be demonstrations and speakers throughout the show.

There are 25 classes in the schedule. Champion Orchid will attract prize money of $500.00 and Reserve Champion $250.00. There is a class for a one metre table display, prize money being $50.00 first, $30.00 second and $20.00 third. First Prize in the other classes will receive $25.00. Second and third will receive an award card and ribbon.

Entries into the show are free and open to all financial members of societies affiliated with S.T.O.C.Q. Inc and other registrants.

A Presentation Dinner including a guest speaker will be held at the Hervey Bay R.S.L. on Saturday evening. On Sunday there will be bush house visiting by bus around Hervey Bay and Maryborough with morning and afternoon tea and a barbecue lunch in Maryborough provided.

Registration Fee is $30.00 which includes unlimited entry into show, Presentation Dinner, Bush House visiting by bus, morning tea, afternoon tea and barbecue lunch on Sunday.

Registrations close Friday, 17th May, 1996 and Registrants who register by Friday 5th April, 1996 will be eligible to be in the draw for an Early Bird Registration Prize.

For further information or registration forms please write to: Mrs N. Hoffmann, 287 John Street, Maryborough Q. 4650 or phone (071) 21 5811 — *Narelle Hoffmann, Hon Secretary/Treasurer, Organising Committee.*

Let's get it Right!

The interesting interview of Frank Fryers in the December 1995 issue of "The Australian Orchid Review" carried a major error of fact.

I wish to correct an ongoing impression that Western Suburbs Orchid Society became Sydney Orchid Society, an error that seems to re-appear in print from time to time.

Sydney Orchid Club was formed at the residence of Mr. Bob Smith, situated in Brighton Avenue, Campsie, with Bob becoming the foundation President.

Western Suburbs Orchid Society was inaugurated in Mr. Norman Keith's photographic Studio at 440 Parramatta Road, Petersham, with Norman being appointed the first President.

Over the years Sydney held Meetings in and about the Campsie Shopping Centre, with outstanding Spring Shows at the Marrickville Town Hall. Subsequently the name was changed from Club to Society.

The Society moved to their present venue The Remembrance Hall at Lakemba many years ago.

Western Suburbs was mostly based at

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THIS AND THAT

The Memorial Hall in Concord, subsequently transferring after many many years to Woodstock in Burwood.

These two Societies have always been separate entities — there was never any amalgamation.

Let us set the record straight once and for all time — *efjay, Five Dock.*

Tropical Queensland Orchid Council Conference

"Go With Gold in 1996"

Charters Towers June 7th-10th, 1996.

Organised by the Charters Towers Orchid and Allied Plants Soc. inc.

The Conference

This conference is held annually over the Queen's Birthday Weekend. This year the host town is Charters Towers which is about 135km south-west of Townsville in Tropical North Queensland. Enjoy the magnificent winter weather of the North. The conference will feature the usual TQOC goodies like competitive displays, commercial sales, guest speakers, great food and the friendly country atmosphere.

These conferences have established a fine reputation and in recent times have attracted a considerable number of overseas travellers and last year for the first time a train load of visitors from Brisbane. Every year the visitors leave saying,

"What a friendly bunch."

This year with some good old country hospitality and some damper and tea and laced with history this will be no exception.

Sights to be seen

Make this a holiday as it is the height of the tourist season. Charters Towers and Ravenswood nearby are old gold mining towns. Visiting some of these sites you feel like time has stood still for a hundred years. Fascinating old heritage buildings and treatment plants. A trip to a new gold mine is on the agenda. It will be interesting to compare this with the relics of mines of old. Other places you may like to see are:

The wild flower area an hours drive to the west at the Burra Range. Famous for its Grevilleas namely *G. decora, sessilis, pteridifolia* and the natural hybrid Sandra Gordon and usually at its peak this time of the year. Another hours drive and you experience the fabled "Outback" where it becomes so flat that you experience a circular horizon. Further west approximately 7 hours to Mt Isa.

To the north, half an hours drive, you have the fossil beds at "The Bend". Large masses of fossilised coral and nearby there are red falls and white falls with water tumbling off of the basalt lava flows.

Geologically you can see this is a fascinating area and if you are an outdoor type and prepared to rough it leave yourself time for fossicking. To the north-east little over an hour's drive there is Townsville, the undeclared capital of North Queensland and the gateway to the Barrier Reef. If you don't fancy the trip out to the reef, there is a world class coral reef aquarium you can visit. The "Commons" bird sanctuary is only second to Kakadoo and the dive trip to the "Yongala" wreck is world listed.

Within Charters Towers itself you have interesting buildings like the restored Stock Exchange. This exchange the second for Queensland stands as an indicator of Charters Towers' prior importance to the economy of Australia. This city, built on gold, soon became the second largest city in Queensland, then the unrivalled capital of the north. There are mining museum and ruins of treatment plants and mullock heaps to be inspected.

Conference Speakers

This years speakers will be talking on their favourite topics.

Bob Smythe, what else but Phalaenopsis.

Phalaenopsis the Rolls Royce of Orchids

Ross Maidment Cattleyas

David Banks species

Graeme Banks is the guest speaker on Saturday Night.

What you should do now

Get on to the mailing list.

Contact: The Conference Secretary, 31 st TQOC Conference, P.O. Box 1225, Charters Towers, Q. 4820, Phone (077) 87 1842 (a/h).

Closing date for applications without penalty 20/4/96. Closing date (absolute) 24/5/96.

Love to see you all there—*Sandra Smith, Secretary.*

The Royal Horticultural Society Orchid Registration Advisory Committee

Newsletter No. 13

1. Notices to Registrants

(a) Date of first flowering. Further to the note in ORAC Newsletter no. 12 registrants are reminded that if the date of first flowering of the first plant of that grex ever to have flowered is not known to them, they should give the date on which they first flowered a plant of the grex concerned and state that this is the case on the form.

It must also be clearly understood that no grex can be registered until at least one plant has flowered. If plants of a grex need to be sold or distributed before flowering it is suggested that they should be labelled with a distinctive reference and/or their parentage.

(b) Signing the application form. Failure to sign and date the form leads to inevitable delay whilst it is returned to the applicant. It is in everyone's interest that registrants check carefully that all parts of the form have been completed and that the form has been signed and dated.

(c) Postal/Money orders. Registrants are reminded that since August 1992 the International Registration Authority no longer accepts postal/money orders in respect of orchid registration application fees, due to the excessive administrative/currency conversion costs involved in reclaiming such methods of payment.

(d) Girocheques. When registrants pay application fees by girocheque and the latter is sent separately to the completed forms, it would be much appreciated by the Registrar if a note indicating that the payment was on its way could be included *with the forms.*

(e) Photocopied application forms. Registrants are requested not to submit applications using photocopied versions of the application form. There are several practical and administrative reasons for insisting upon this, not least the convenience to the Registrar in being readily able to distinguish the original from the copy which is returned to the registrant.

(f) Application fee. Following discussions at its last two meetings ORAC has agreed not to recommend any change in the level of the application fee. Since the fee has remained unchanged now for several years this does, in effect, represent a reduction in real terms. The Committee has also agreed not to recommend the creation of special concessionary rates for large volume registrants as this would create administrative complications and could be seen to penalise the small-scale grower or amateur breeder.

(g) Originator's permission. Registrants are requested to ensure that if permission to register a grex is required from the originator, this must be obtained *in writing.* Such permission should be retained by the applicant so that it could be supplied to the Registrar *if required.*

(h) Originator unknown. Applicants are

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reminded that if the originator is unknown additional information is necessary. The information required is a note of the steps the applicant has taken, albeit unsuccessfully to trace or identify the originator. This should include a statement as to whether or not information has been requested from the source of the plant, or the reason why there was no means of seeking this information.

(i) Possible delay to registration. There may be some delay in the processing of applications in the first quarter of 1996 as The International Orchid Register is being transferred from the Prime computer in London to a PC in the Registration Office in Somerset.

2. Report from the Registrar

(a) Applications continue to arrive at an average of 300 a month, most of which were processed within 2-3 days of receipt. The number of new applicants continue to rise especially from Australia and South America.

(b) During the last registration period two natural genera, *Bromheadia* and *Oeceoclades*, have entered registration for the first time, as well as thirty-six new species, including three *Bulbophyllum* and six *Cirrhopetalum*.

(c) Preparations are now well in hand for the next Five Year Addendum (1991-1995) to Sander's List of Orchid Hybrids. Publication is still scheduled for May 1996.

3. News from the Orchid Database Company

The original issue of Part 1 of Version 3.0 of the RHS Orchid Information System had proved to be unsatisfactory for a number of reasons and it was expected that free, replacement copies would be provided to subscribers by the Company. The first issue of Part 2 of version 3.0 was expected early in 1996.

The RHS Orchid Registration system its to be discontinued as a separate produce, being subsumed within the RHS Orchid Information System Part 1. People wanting just orchid hybrid registration details will buy just Part 1. They will have the option of buying Part 2 as well if they want the full system with all the additional features such as awards, pictures and references.

The revised prices for the CD's were to be as follows: Part 1, US$ 295; Part 2, US$ 295; both parts together US$ 495.

In future, whilst individual Societies would still undertake to market the CD's all subsequent dealings with subscribers would devolve to the Australian partners. The AOS would continue to produce the popular hard copy reports.

Dr A C Leslie
Secretary, ORAC
RHS Garden, Wisley, Woking, Surrey
GU23 6QB UK

VALE – W.R. Smoothey

11 July 1911-29 November 1995

William (Bill) Robert Smoothey was born in the Queensland country town of Gympie where his parents were associated in the gold mining industry. He came to Sydney in 1916 and attended Willoughby Public School, Chatswood Intermediate High School and finally North Sydney Boys High School from where he matriculated to enter University. He articled to a Sydney solicitor and at the age of twenty one he was enrolled and admitted as a solicitor of the Supreme Court of New South Wales. (It is reported that at the time he was the youngest to be admitted to the Bar).

Bill joined the Department of Main Roads as a solicitor and severed his connections with the Department in 1951 to join the Metropolitan Water Sewerage & Drainage Board, initially as an assistant solicitor and rose to the position of Chief Solicitor of the Board, which office he held until retirement in 1976.

Bill's interests were many and varied. He played competitive tennis and was a keen golfer. He was associated with many organisations and gave his legal expertise to them. Bill acted as honorary solicitor to St. John's Ambulance of New South Wales, Fishing Clubs and Probus Clubs and was responsible for drawing up their Constitutions.

His involvement with the Free Mason Movement was long and dedicated. He gave nearly sixty years service to the Movement and held the rank of Past Grand Master of New South Wales. He had also been a member of the Free Mason's Board for many years and contributed legal assistance to the diverse institutions of the Masons.

World War II saw him serve with the Royal Australian Air Force until he was released into civilian life as he was medically unfit.

However, Bill will be best remembered to us for his contribution to the orchid world.

* Joined The Orchid Society of New South Wales in 1945 and served on the Committee through to 1995 (except when he stood down for one year in 1989).

* Been honorary solicitor for orchid societies in New South Wales, and with the introduction of The Association of Corporation Act, Bill provided the Affiliated Societies with draft copies of Articles of Association.

* In 1960, in conjunction with the late Sir John Hall Best (then President of The Orchid Society of New South Wales) was responsible for the formation of The Australian Orchid Council. His legal background was instrumental in drawing up the initial Constitution of the Council.

* Has been the Australian representative on the World Orchid Commission and also a member of The International Commission of Botanical Nomenclature.

* Was prominent in the finalisation of Judging Standards and Rules for Uniform Judging in Australia.

* Bill held many positions on The Australian Orchid Council, holding the office of Vice President for five years prior to becoming President from 1969-71. He was appointed an Honorary Fellowship of the Council in 1969. He also held the office of Registrar General of Awards and Registrar of the Orchid Society of New South Wales — although he was never a Judge. He performed these duties with his usual high standard he set.

* Bill had a great interest in Australian Native Orchids and until last year was very involved with The Ira Butler Trophy Committee.

He travelled extensively and attended many world orchid conferences. He played a prominent part in the Sixth World Conference in Sydney in 1969 — being Vice Chairman of the Working Committee and also responsible for Reception and Hospitality.

* Was Patron of Sydney Orchid Society for many years.

Among unique persons Bill stood tall. His easy confident and approachable disposition and his obvious willingness to help people endeared him to many. Any organisation fortunate enough to benefit from his expertise received nothing less than his own high standard.

Bill will surely be missed by his many friends both in Australia and overseas. I was fortunate enough to know him for a short time and always appreciated his judgement and thoughtfulness and enjoyed his elfin sense of humour.

Our paths crossed and for that I am grateful.

Allan Alvis
5 Knocklayde Street
Ashfield, NSW 2131.

The Origin of Australian Orchids

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Phal. Brother Stripes x Abendrot

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AOR 121

New Orchid Hybrids

APRIL/MAY/JUNE/JULY 1995 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
AËRANGIS		
Spiculakot	*spiculata* × *kotschyana*	W. Neptune (F. Hillerman)
AËRIDES		
Lewis Hooten	*crispa* × *multiflora*	E. Christenson
ALANGREATWOODARA		
Kiwi Spotted	*Agwa.* Alan × *Prom.* Kiwi Small World	R. Tucker
Kiwi Sunrise	*Agwa.* Alan × *Z.* Perrenoudii	R. Tucker
Kiwi Sunset	*Agwa.* Alan × *Z.* Helen-Ku	R. Tucker
ALICEARA		
Ann de Booth	*Alcra.* Dorothy Oka × *Onc. maculatum*	Everglades
Marsh Delight	*Alcra.* Hawaiian Delight × *Onc. marshallianum*	Everglades
Syd Wray	*Mtssa.* Charles M.Fitch × *Onc. crispum*	Everglades
ANGRANTHES		
James Kelley	*Aërth.* Grandiose × *Angcm. leonis* †	B. Thoms
ASCOCENDA		
Fuchs Bongo	*Ascda.* Butterfly × *V.* Antonio Real	R. F. Orchids
Martin's Agatha	*Ascda.* Fred's Fancy × *Asctm. curvifolium*	G. Daubenspeck (N. Petasak)
Ono	*Ascda.* Christine Ang × *Ascda.* Golden Moon	Hajime Ono
BAKERARA		
Octopus Garden	*Mtssa.* Explorer × *Odcdm.* Costa Rica	Beall
BEALLARA		
Dancing Matador	*Mtssa.* Limbo Dancers × *Oda.* Matador	Everglades (George Black)
BEARDARA		
Enzomondo Sunrise	*Ascps.* Irene Dobkin × *Dtps.* Enzomondo Candida	Enzomondo
BRASSADA		
Harvey Fountain	*Brs. arcuigera* × *Ada keiliana*	Everglades
BRASSOCATTLEYA		
Angie Aguirre	*C.* Nancy Off × *Bc.* Palais de Glace	Rod McLellan Co.
Duh's White	*B. digbyana* × *Bc.* Mount Hood	S. C. Duh
BRASSOLAELIOCATTLEYA		
Amanecer de Oro	*Blc.* Pokai Gold × *Blc.* Yellow Imp	R. Sobrino (O/U)
Atardecer Borincano	*Lc.* Trick or Treat × *Blc.* Oconee	R. Sobrino
Banjong Pattaya	*Lc.* Hunabu Fascination × *Bc.* Roman Holiday	B. Mianmanus
Banjong White	*Blc.* Sylvia Fry × *C. walkeriana*	B. Mianmanus
Bessie Leonard	*Lc.* Blue Koi × *Bc.* Thorntonii	Hoodview
Big Eye	*Blc.* Amy Wakasugi × *Lc.* Waianae Sunset	Wen-Chung Hong
Brilliant Kihyo Takei	*Blc.* Faye Miyamoto × *Blc.* Blumen Insel	Akatsuka Orch. Gdns.
Carolina Orange D'Or	*Blc.* Carolina Golden D'Or × *Blc.* Malworth D'Or	Lenette
Dark Origin	*C.* Califlora × *Blc.* Amy Wakasugi	Don Massey
Duh's Ruby	*Lc.* Pirate King × *Blc.* Sunset Bay	S. C. Duh
Duh's Silver Lady	*Lc.* Lisa Ann × *Blc.* Purple Ruby	S. C. Duh
Duh's Sweet	*C.* Chocolate Drop × *Blc.* Manteo	S. C. Duh
Enzan Skies	*Lc.* Sierra Skies × *Blc.* Dinsmore	Mukoyama
Golden Ant	*Blc.* Golden Slippers × *Blc.* Memoria Ong Wen-Mo	Wen-Chung Hong
Golden Loot	*Blc.* Alicia Golden Dawn × *C. luteola*	D. Neuendorff
Golden Waterfall	*Blc.* Sunset Bay × *Blc.* Memoria Emma Chung	Wen-Chung Hong
Green Bay	*Blc.* Golden Fortune × *B. digbyana*	Wen-Chung Hong
Green Hood	*Blc.* Green Eagles × *Bc.* Mount Hood	Wen-Chung Hong
James Girlando	*Bc.* Pink Sensation × *Lc.* Drumbeat	Stewart Orch.
Jiuhbao Rainbow	*Blc.* Chialin Beauty × *Blc.* Lucky Strike	Wen-Chung Hong
Jiuhbao Ruby	*Blc.* Chialin Beauty × *Lc.* Pirate King	Wen-Chung Hong
Last Hurrah	*Lc.* Peggy Huffman × *Blc.* Buttercup	Stewart Orch. (M. Spencer)
Marbellous Yuhi Sugita	*Blc.* Waianae Coast × *Blc.* Makaha Glolight	Akatsuka Orch.Gdns.
Memoria Charles Porter	*Lc.* Loge × *B. nodosa*	Byrd's (B. Porter)

NAME	PARENTAGE	REGISTERED BY
BRASSOLAELIOCATTLEYA continued		
Memoria Elsie Williams	*Blc.* Golden Delicious × *C.* Interglossa	N. Woolley (Aranbeem)
Memoria Terry Stillman	*Blc.* Bryce Canyon × *Blc.* Orange Nuggett	G. Rex
Miva Baie Doree	*Blc.* A.J.Schreiver × *Lc.* Gold Digger	Michel Vacherot
Mulata Criolla	*Blc.* Dinh Thuy Yen × *Blc.* War Chant	R. Sobrino
Sanyang Ruby	*Blc.* Waianae Coast × *Blc.* Chia Lin	Wen-Chung Hong
Sheryl Shenk	*Lc.* Prophesy × *Blc.* Murray Spencer	Stewart Orch.
Shikishima	*Bc.* Pastoral × *Lc.* Irene Finney	K. Nomoto
Simply Stunning	*C.* Karae Lyn Sugiyama × *Blc.* Sylvia Fry	Don Massey
Stan's Golden Car	*Bl.* Richard Mueller × *Blc.* Makaha Gold	S & W
Taggart's Alley	*Blc.* Acapana × *Blc.* Ports of Paradise	L. Odlum (Muses' Trop.)
Vietnam Sunrise	*Blc.* Waikiki Gold × *Blc.* Orange Nuggett	D. Neuendorff
BURRAGEARA		
Ballet Florida	*Onc.* Ballet × *Burr.* Dee Luce	Everglades
Dandy Candy	*Mtdm.* Dark Chocolate × *Burr.* Dee Luce	Everglades
Four Musketeers	*Mtdm.* Chad Rumfelt × *Oda.* Lippestern	Everglades
Wayne Lippard	*Mtdm.* Chad Rumfelt × *Burr.* Dee Luce	Everglades
CATASETUM		
Donna Wise	*tenebrosum* × Orchidglade	M. Dimmitt (E. Wise)
CATTLEYA		
Barbara Linden	Peregrine × *trianaei*	I. Linden (Stewart Orch.)
Janelle	Inez Okimoto × *walkeriana*	M. Miles (Aranbeem)
Wössner Purple Wings	Batalinii × Karol Wojtyla	F. Glanz
Yesteryear	Lindo Mar × Tiffin Bells	Don Massey
CATTLEYTONIA		
Drop of Brandy	*Ctna.* Brandi × *C.* Narooma	D. Neuendorff
Lavender Maid	*Ctna.* Maui Maid × *C. walkeriana*	H & R
Maui Dipper	*Ctna.* Maui Maid × *C.* Little Dipper	H & R
Surprise	*Ctna.* Keith Roth × *C.* Horace	Carole Pearson (A. Klehm)
Why Not Walk	*Ctna.* Why Not × *C. walkeriana*	Golden Blossom
CHRISTIEARA		
Jerry Eckert	*Aër. lawrenceae* × *Ascda.* Elaine Taylor	R. F. Orchids
CIRRHOPETALUM		
Emly's Angel	*campanulatum* † × *auratum* †	Suphachadiwong
COCHLEANTHES		
Blue Bonnet	*wailesiana* × Overbrook	Clackamas (L. Buckley)
COLMANARA		
John Hainsworth	*Colm.* Jungle Monarch × *Milt. warscewiczii*	Everglades
Jungle Cat	*Colm.* Jungle Monarch × *Odm. bictoniense*	Everglades
CYMBIDIUM		
Alex Szabo	Tongariro × Trinity Hall	Ezi-Gro (A. R. Bryant)
Applejack	Rincon × Baltic Amber	L. Batchman (Rudvalis)
Apple Valley	Hamsey × Applejack	L. Batchman
Arcadian Lady	Stanley Fouraker × Rose Girl	Takaki O. N.
Art-Deco	Jolity × Mandolin Wind	L. Batchman
Baltic Elf	Baltic Moon × Olymilum	L. Batchman
Bangles	Zot × Piñata	L. Batchman
Barbara Steer	Eileen Souter × Lone Star	Ezi-Gro
Beautiful Lime	Giro × Vanguard	Takaki O. N.
Bo Jangles	Applejack × Sleeping Dream	L. Batchman
Bolero	Bermagui × Tethys	G. W. Cole
Boleyn	Solana Beach × Howard Cobb	Brookside (Paul Miller)
Boogie Down	Warona × Applejack	L. Batchman
Carnival Queen	Beaconfire × Valley Flower	D Roesler
Charmy Green	Katydid × Sleeping Beauty	M. Ujike
City of Angel	Excalibur × Fred Stewart	Akatsuka Orchid Co.
Comanche	Cariga × Applejack	L. Batchman
Country Melody	Melody Fair × Cleo's Melody	Mukoyama
Cozmic	Jolity × Coraki	L. Batchman
Crown of Creation	James Wattie × Tethys	Orchids Ltd [CA] (Geyserland)
Crystal Tears	Music Box Dancer × Eastern Star	M. Ujike
Debbie Adams	Tidbit × Jill	Adams Enterpr. (A. Easton)
Dipsy Doodle	Zot × Tethys	L. Batchman
Dream of Island	Hiroshima Golden Cup × *eburneum*	Takaki O. N.
Dusty Rose	Girl Crazy × Mariner	L.Batchman
Endless Love	Sarah Jean × Valley Flower	M. Ujike

NAME	PARENTAGE	REGISTERED BY
CYMBIDIUM continued		
Erin Mist	Green Glass × Baltic Honey	L. Batchman
Evelyn Victoria	Lancashire Rose × Sylvan Globe	Ezi-Gro (A. R. Bryant)
Fall in Love	Great Waltz × Cherry Queen	M. Ujike
Far Horizon	Cariga × Featherhill Fanfare	L. Batchman
Fiddle Faddle	Downs Delight × Featherhill Fanfare	L. Batchman
Fine Touch	Winter Wonder × Bishop's Cycle	Ezi-Gro
Firecracker	Ann Miller × Hot Line	L. Batchman
Flaming Cat	Flaming Mitzi × Piñata	W. D. Bailey
Forest Pixy	Petite × Peter Pan	Takaki O. N.
Goldenheart	Giro × Hiroshima Golden Cup	Takaki O. N.
Grace Tiara	Winter Paradise × Valley Flower	M. Ujike
Greenezelle	Zumma Boyd × Green Glass	L. Batchman
Hawaiian Sunset	Little Orphan Annie × Tracey Reddaway	P. & C. Kajikawa (Geyserland)
High Fashion	Enchanted Profile × Mariner	L. Batchman
Honey Land	Honeymoon × Hiroshima Golden Cup	Kawano Mericlone
Iceburg	Magic Elf × Lone Star	Ezi-Gro
Jessie Gem	Jessie Blakiston × Chocolate Gem	H. Palmer
Jessie Winevale	Jessie Blakiston × Winevale	H. Palmer
Jim Grantham	Sensation × Satsuma	Ezi-Gro (Perth Orch.)
Kammel	Hope Ranch × Featherhill Fanfare	L. Batchman
Kiss Me	Excel × Valley Flower	M. Ujike
Kleen Winner	Claude Pepper × Valley Bay	W. D. Bailey
Legend	Panalatinga × Kanyaka	W. D. Bailey
Lemon Beauty	Lemon Ice × Sleeping Beauty	Takaki O. N.
Little Flamingo	Sylvan Rainbow × Valley Flower	M. Ujike
Little Ruby	Runaway × Ruby Eyes	Ezi-Gro
Luna Song	Hiroshima Golden Cup × Eastern Star	M. Ujike
Magic Flora	Sarah Jean × Kiss Me	M. Ujike
Melody King	Melody Fair × Hiroshima Rora	M. Ujike
Memoria Ginger Rogers	Cromwell × Alnwick Castle	Orchids Ltd [CA] (Geyserland)
Metamorphosis	Winter Wonder × *devonianum*	G. W. Cole (Geyserland)
Misty Wind	Sleeping Beauty × Sanuki First Lady	M. Ujike
Mystery Island	Oriental Mystery × *eburneum*	Takaki O. N.
Nancy Hatsuko Ikeda	Early Alice × Bewitched Baker	E. Stockstill (A. Easton)
Natalie Matsumoto	Chiefs Aura × Dolly	L. Matsumoto (A. Easton)
Noble Green	Eastern Wind × Katydid	M. Ujike
Opal Paul	Opal Mist × Sensation	R. F. Evans
Para Wirra	Claude Pepper × Kiata	D. Roesler
Pink Snow	Hazel Tyers × Fred Stewart	P. & C. Kajikawa (Geyserland)
Plum Champagne	Pink Champagne × Howard Cobb	B. Tagami
Poo Hawk	Tapestry × Hot Line	L. Batchman
Rainbow Dance	Alexanderi × Great Waltz	M. Ujike
Rainbow Garden	Music Box Dancer × Valley Flower	M. Ujike
Rainbow Shower	Winter Paradise × Kiss Me	M. Ujike
Rod	Sylvan Globe × Terama	Ezi-Gro (A. R. Bryant)
Ruby Shower	*devonianum* × Rathel	Takaki O. N.
Ruth Ballard	Chocolada × Lunara	Ezi-Gro (Cuming)
Ruth Curran	Sylvan Star × Via Del Playa	Ezi-Gro (A. R. Bryant)
Scarlet Wind	Eastern Star × Valley Flower	M. Ujike
Shawnee Mission	Focalize × Vieux Rose	L. Batchman
Shoo Fly	Zot × Robin	L. Batchman
Shoshone	York × Carilara	L. Batchman
Silky Wind	Oratory Boy × Sleeping Beauty	M. Ujike
Silver Pegasus	Sleeping Beauty × Eastern Wind	M. Ujike
Solana Sunset	Warona × Hot Line	L. Batchman
Spring Holiday	Buxom × Valley Flower	M. Ujike
Sweet Cologne	Sweet Wine × Eastern Star	M. Ujike
Sweet Treat	Sunbreeze × Mesa Zia	D. Roesler (Schaefers)
Sweet Waltz	Great Waltz × Sweetheart	Takaki O. N.
Tagami's Gem	Ngaire × Cricket	B. Tagami
Teddy Roosevelt	Via Arcadian Rincon × Vogelsang	Orchids Ltd [CA] (Geyserland)
Tony McCartney	Coraki × Sister Miller	Ezi-Gro (A. R. Bryant)
Top Gun	Chocolada × Sensation	Ezi-Gro (D. J. Mills)
Tweedle Dee	Rozel Bay × Carilara	L. Batchman
Velvet Memory	Sanuki First Lady × Valley Flower	M. Ujike
Wichita	Rosinante × Valley Flower	L. Batchman
Winter Angel	Lucky Kawano × Winter Fair	Takaki O. N.
Winter Pegasus	Winter Dream × Via Costa	M. Ujike (O/U)
Winter Solana	Winter Fire × Solana Beach	H. Palmer
Wyandotte	Hunter's Point × Khyber Pass	L. Batchman
Yellow Candy	Golden Elf × Sleeping Beauty	M. Ujike
CYPRIPEDIUM		
Memoria Gerd Kohls	*calceolus* × *henryi*	Lowland-Biotech (P. Stein)

NAME	PARENTAGE	REGISTERED BY
DARWINARA		
Fuchs Cream Puff	*Neof. falcata* × *Vasco.* Five Friendships	R. F. Orchids
DEGARMOARA		
Kramer Island	*Mtssa.* Aztec × *Odtna.* Lake Harbor	Everglades
DENDROBIUM		
Alick Dockrill	Maron × *speciosum*	Florafest
Allstar	Star of Dawn × Star of Gold	N. Mitchell (S. Batchelor)
Amber Dale Shaw	Rhodopterygium × *primulinum*	B. Southwood
Bali Moon	Lily Yang × Joan Kushima	Sien Orch.
Bali Queen	Queen Southeast × Mongkorn Star	Sien Orch.
Benazir Bhutto	Singa Mas × Meala	Singapore Bot. Gdns.
Betty Rose	Clarrie Davis × Autumn Show	Cairns Orchid Centre
Border Sunset	Gulginni × Star of Gold	S. Penman
Bota Blue	Ekapol × Rung Roeng	Bot. Gdns. Bangkok
Bribie Bright Beauty	Hickam Deb × Thailand	M. Venz (Brighton Nursery)
Bribie Ten Ninety-Seven	Bribie Bright Beauty × Dal's Pride	M. Venz (Brighton Nursery)
Brown Sugar	*gouldii* × *cochliodes*	C. Maly (K. Kamiya)
Burgundy Cream	Peewee × Dot Sheen	N. Finch
Butter Gold	Susan × Emma	W. Turville (R. & D. Sheen)
Butter Star	Star of Riverdene × *gracillimum*	W. Turville (R. & D. Sheen)
Candice	Zip × Aussie Quest	Greg Field
Clarrie Davis	Kultana × Margaret Joan Fell	Cairns Orchid Centre
Copper Blaze	Aussie Bonanza × Peter	W. Turville (O/U)
Elladae	Ellen × *adae*	N. Mitchell (S. Batchelor)
Fukuoka	Khunying Boonruen × *lasianthera*	Singapore Bot. Gdns.
Gillieston's Royalty	Peewee × Gulginni	Florafest (W. Skillicorn)
Green Hue	*engae* × Aussie Green	W. T. Upton
Gulfstream Blue	Siah Ko-Ko × Blue Spire	Orchid World Int. (O/U)
Hamana Lake	Kurenai × Snow Angel	T. Nakajima
Hawaiian Pride	Hawaiian Starfire × Fran's Pride	M. Hiraiwa
Indonesia Emas	Golden Triumph × *tangerinum*	Sien Orch.
Kate Turville	Regal Affair × Zip	N. Finch
Kathy Valentino	Lipstick Beauty × Alice Noda	Richella
Khamtay Siphandone	Sonia × D'Bush Pansy	Singapore Bot. Gdns.
Kuskus	*lawesii* × *arcuatum* †	T. Nishii
Liana Chiemi Matsumoto	Supernestor × Nestor	B. Southwood
Lisa Turville	Regal Affair × Ellen	N. Finch
Memoria Margaretha Junita	Madame Uraiwan × Joan Kushima	Sien Orch.
Million Stripes	Jacky × *dicuphum*	Kanjana
Myall Charm	Myall Dream × *johannis*	Mrs M. Korsman
Myall Dream	Myall Mist × *nindii*	Mrs M. Korsman
Pacific Delight	Hermon Slade × *atroviolaceum*	H & R
Paradise Beryl	*mohlianum* × *miyakei*	Paradise [NZ]
Paradise Elizabeth	*mohlianum* × *subclausum* †	Paradise [NZ]
Paradise Lorna	*mohlianum* × *lawesii*	Paradise [NZ]
Paradise Uaemali	Paradise Dream × *lawesii*	Paradise [NZ]
Peach Pie	Miyajima × Winter Cherry	Takaki O. N.
Powhatan	Plum Creek × Orglade's Orbit	J. Denson (O/U)
Robert Lentz	Little Diamond × Powhatan	J. Denson (O/U)
Ron Falvey	Ram Misra × Therese Turner	Cairns Orchid Centre (R. Falvey)
Spring Jewel	Mild Yumi × Hatsushimo	Takaki O. N.
Stan Rose	Clarrie Davis × *phalaenopsis*	Cairns Orchid Centre
Sweet Lemon	Kidama × Oriental Dream	Takaki O. N.
Toshitugu Hirohashi	Tumphal × *nindii*	Lee Kim Bak
Travis Bailey Shaw	Adastra × *superbum*	B. Southwood
Tsin Trend	King Dragon × Sri-Racha	Kasetsart Univ.
Vaclav Havel	Singa Mas × Nus Sudiono	Singapore Bot. Gdns.
Violady	*atroviolaceum* × Lady Hamilton	Takaki O. N.
Western Red	Lucky Belle × Tokiko Inaba	A. Watkinson (O/U)
DIACATTLEYA		
See Luan	*C.* Orglade's Blaze × *Diacm. bicornutum*	Harold Johnson
DISA		
Eunice Taylor	Kewbett × *aurata*	H. H. Taylor
Howard Taylor	Reheat × *aurata*	H. H. Taylor
Trivata	*tripetaloides* × *bivalvata*	H. Koopowitz
DORITAENOPSIS		
Banjong Gems	*Phal.* Hunabu Celeste × *Dor. pulcherrima*	B. Mianmanus
Bobby	*Dtps.* Arlington Amethyst × *Phal.* Penang Girl	R. Griesbach
Buddha's Promise	*Dtps.* Jerry Vande Weghe × *Phal.* Golden Buddha	John H. Miller

NAME	PARENTAGE	REGISTERED BY
DORITAENOPSIS continued		
Cloud Ballet	*Phal.* Pure Allure × *Dtps.* Bright Kiss	H. P. Norton
Devil's Advocate	*Phal.* Patience × *Dtps.* Barbara Hoover	John H. Miller
Doktor Franz Vogt	*Phal.* Bavarian Winter × *Dtps.* Praslin	W. H. Kaiser
Enzomondo Dora	*Phal.* Zora Amato × *Dtps.* Enzomondo Candida	Enzomondo
Eugene Carter	*Phal.* William Sanders × *Dtps.* Orglade's Tartan	B. Woodson
Gia Pham	*Dtps.* Texas Snow × *Phal.* Mimi Starke	Gulf Coast O. S. (Riverbend)
Jun Yu Lan	*Dor. pulcherrima* × *Phal.* George Vasquez	How Yee Peng
Kaydee	*Dtps.* Katie × *Phal.* Hakalau Ruler	John Hutchinson
Lim Su See	*Dtps.* Seletar Pink × *Phal.* Striped Prince	David Lim
Little City	*Dtps.* City Girl × *Phal. amabilis*	Akatsuka Orchid Co.
Little Cream	*Dtps.* Melinda Wheeler × *Phal. amabilis*	Akatsuka Orchid Co.
Mivadoc	*Dtps.* Miva Martapi × *Phal.* Saint Raphael	Michel Vacherot
Ng Ju Li	*Dtps* Seletar Pink × *Phal.* Midori Matsumoto	David Lim
Pantomime	*Phal.* Irma Anesi × *Dtps.* Barbara Hoover	John H. Miller
Pisgah Candy	*Phal.* Barbara Moler × *Dtps.* Margery Adams	Owens Orchids
Pisgah Gold Blush	*Phal.* Hausermann's Goldcup × *Dtps.* Pisgah Wonder	Owens Orchids
Pisgah Rouge	*Dtps.* Pisgah Sands × *Phal.* Micha's Child	Owens Orchids
Roman Mist	*Phal.* Roman Topaz × *Dtps.* Roman Cloud	J. Romans
Rong Guan Mary	*Phal.* Little Mary × *Dtps.* King Shiang's Rose	Rong Guan
Rong Guan Mini	*Phal.* Cassandra × *Dtps.* King Shiang's Rose	Rong Guan
Silver Treasure	*Phal.* Hakalau Queen × *Dtps.* Orglade's White Rain	Martin County (Carmela)
Soroa Havana Moon	*Dtps.* Orglade's Toast × *Phal.* Florida Snow	Soroa
Soroa Intermezzo	*Dtps.* George Moler × *Phal.* Perfect Choice	Soroa
Sogo Lit-Beauty	*Phal. equestris* × *Dtps.* Sun Princess	Sogo
Sun Prince	*Phal.* Cypress Pink × *Dtps.* Houpi Beauty	Sogo
Taisuco Cordova	*Phal.* Cordova × *Dtps.* Sun-Chen Beauty	W. H. Chen
Taisuco Kinlentine	*Dtps.* King Shiang's Coral × *Dtps.* Happy Valentine	W. H. Chen (Jer-Min Lu)
Taisuco Kouyou	*Dtps.* Kouyou × *Dtps.* Taisuco Kinlentine	W. H. Chen
Taisuco Okaystripe	*Phal.* Chih Shang's Stripes × *Dtps.* Okay Seven	W. H. Chen
Taisuco Valenpink	*Dtps.* Happy Valentine × *Phal.* Lien-Hung Pink	W. H. Chen
Wössner Pixie	*Dtps.* Coral Gleam × *Phal.* Carmela's Pixie	F. Glanz
Zuma Craft	*Dtps.* Orglade's Toast × *Phal. venosa*	Zuma Canyon
Zuma Diadem	*Phal.* Florien × *Dtps.* Coral Harbor	Zuma Canyon
DUNNINGARA		
Coulee Dam	*Mpsa.* Monroe × *Onc. tigrinum*	Baker & Chantry
EPICATTLEYA		
Roman Comet	*Epc.* Dowsett Gem × *Epi. phoeniceum*	J. Romans
Rose Farone	*C. velutina* × *Epi. alatum*	W. Farone
EPIDENDRUM		
Bok Tower	*tampense* × *guatemalense*	J. C. Williams (O/U)
Green Hornet	*cochleatum* × *lancifolium*	H & R
EPILAELIOCATTLEYA		
Eventide	*Lc.* Bright Night × *Epi. rufum*	H. Wallbrunn
Mi Amigo Jose	*Lc.* Scarlet Imp × *Epc.* Frances Dyer	J. Izquierdo (O/U)
GOMOGLOSSUM		
Polly	*Gmgm.* Excitement × *Odm. trilobum*	P. Bates (R. B. Cole)
GOODALEARA		
Helmut Rohrl	*Bak.* Everglades Hunter × *Oda.* Stromar	Everglades
Ponce de Leon	*Bak.* Chuckanut Island × *Oda.* Phoenix Way	Everglades
KAGAWARA		
Enzomondo Rubino	*Ren. imschootiana* × *Ascda.* Medasand	Enzomondo
KEFERANTHES		
Bountiful	*Cnths. wailesiana* × *Kefst. tolimensis*	Clackamas (L. Buckley)
LAELIOCATTLEYA		
Cally Kwong	*C.* Purity × Lc. Canhamiana	Stewart Orch.
Chyong Guu Swan	*Lc.* Wayndora × *Lc.* Persepolis	C. F. Tsao
Flaglade	*C.* Orchidglade × *L. flava*	T. Kuroyanagi
Lady Yasuko	*L.* Pequena Purple × *Lc.* Zuiho	T. Yuhora
Leonard Reed Holguin	*C.* Rita Renee × *Lc.* Persepolis	Stewart Orch.
Memoria Elaine Johnson	*Lc.* Little Susie × *Lc.* Drumbeat	Don Massey
Sweety	*C. forbesii* × *L. sincorana*	O. von Stetten
LAGERARA		
Port Mayaca	*Asp. principissa* × *Oda.* Harrods Forever	Everglades

NAME	PARENTAGE	REGISTERED BY
LYCASTE		
Aquarius	Multiple × Auburn	T. Goshima
Aries	Koolena × Betty Kool	T. Goshima
Chief Joseph	Haida × *macrophylla*	Hoodview
Pisces	Laurencin × Koolena	T. Goshima
MASDEVALLIA		
Ayako Kawatsura	Copper Angel × *schroederiana*	T. Kawatsura
Doctor Joe Walker	*peristeria* × Prince Charming	J. L. Walker (O/U)
Indian Corn	*floribunda* × *mendozae*	F. Feysa
Jack O'Lantern	Kimballiana × Fraseri	R. Hull
Lil	*infracta* × *aenigma*	Mrs L. Severin (O/U)
Rodensue	*urosalpinx* × *agaster*	Venger's (O/U)
Tasmanian Devil	Angel Frost × *floribunda*	F. Feysa
Yutaka Kawatsura	*gilbertoi* × *schroederiana*	T. Kawatsura
MAXILLACASTE		
Kouno	*Lyc.* Balliae × *Max. tenuifolia* †	M. Kouno
MILPASIA		
Monroe	*Milt. warscewiczii* × *Asp. epidendroides*	Baker & Chantry (O/U)
MILTASSIA		
Orcas Island	*Mtssa.* Mourier Bay × *Milt.* Friday Harbor	Baker & Chantry
Psychedelic Star	*Brs. verrucosa* × *Milt.* Carnival	Rod McLellan Co.
MILTONIA		
Anamaria Baptista	Memoria Ida Seigel × Franz Wichmann	F. Baptista (Orchid House)
Carnival	Gayety × Bluntii	Rod McLellan Co.
Duvall	Kay Rinaman × Kitty Schwarz	Baker & Chantry
Earl Wirth	Vashon Harbor × Woodinville	Baker & Chantry
Eljahar	*spectabilis* × Moirmoir	W. J. Harper (Sherlock Orch.)
Friday Harbor	Cogniauxiae × Sao Paulo	Baker & Chantry
Gerry Lee	Beall's Strawberry Joy × Emotion	Hoodview
Ivory Belle	Alderwood & Shilshole Bay	Beall
Kathie Kei	Jonora × Memoria Sadao Ono	Hajime Ono
Kima	Soquel × Hudson Bay	Hoodview
Moirmoir	Goodale Moir × May Moir	W. J. Harper (O/U)
Pink Lady	Alysen Ono × Eileen Ono	Hajime Ono
Sandee Margeson	Thomas Beall × Tod Dirks	Hoodview
Shoreline	Evergreen Joy × Alderwood	Baker & Chantry
Summer Time	*regnellii* × Earl Dunn	Takaki O. N.
Veronica Baptista	Kay Rinaman × Anamaria Baptista	F. Baptista (Orchid House)
White Wave	Lynne Waihee × Sierra Snows	Hajime Ono
MILTONIDIUM		
Charles Woolnough	*Mtdm.* Golden Glow × *Onc.* Lava Flow	L. Woolnough
Milton's Candy	*Mtdm.* Dark Chocolate × *Onc. powellii*	Everglades
MOKARA		
Bota Gold	*Arach. hookeriana* × *Ascda.* Duang Porn	Bot. Gdns. Bangkok
Shenzhen Aircity	*Aranda* Majula × *Ascda.* Madame Kenny	How Yee Peng
ODONTIODA		
Altona	*Oda.* Feuerball × *Oda.* Main Ridge	G. McCraith
Badgar Creek	*Oda.* Phryne × *Oda.* Petit Port	G. McCraith
Goodonya	*Oda.* Point Lonsdale × *Odm.* Tontor	G. McCraith
Gulf Stream	*Odm. trilobum* × *Oda.* Actrix	Everglades
John Hainsworth	*Oda.* Red Buck × *Oda.* Ebury Court	Strawberry Creek (R. Dugger)
Leslie Halpern	*Oda.* Joe's Drum × *Oda.* Florispum	B. Cobbledick
Moonstone Beach	*Oda.* Brocade × *Oda.* Newton Fire	Strawberry Creek (Orchid House)
Rawdon Raven	*Odm. bictoniense* × *Oda.* Dalmar	Strawberry Creek (Mansell & Hatcher)
Red Cougar	*Oda.* Lautrix × *Oda.* Blaze	Mukoyama (H. Liebman)
Sovereign Hill	*Oda.* Lynx × *Oda.* Main Ridge	G. McCraith
Stirleon	*Oda.* Elpheon × *Oda.* Stirlana	R. Culver (R. Dugger)
Wally Curry	*Oda.* Aviemore × *Oda.* Ingera	R. Culver (Mansell & Hatcher)
ODONTOCIDIUM		
Addie Reddick	*Onc.* Colon × *Odm. hastilabium*	Everglades
Yukon Ballet	*Onc.* Ballet × *Odm.* Yukon Monarch	Everglades
ODONTOGLOSSUM		
Yukon Monarch	Yukon Harbor × Monarch Mountain	Everglades (O/U)

NAME	PARENTAGE	REGISTERED BY
ODONTONIA		
Purple Glory	*Milt.* Kibet × *Odm.* Costro	H. Rohrl (George Black)
Susan Cioci	*Milt.* Miami Moon × *Odm. hastilabium*	Everglades
ONCIDIUM		
Auntie Baby	Sharry Baby × Auntie Bea	Everglades
Baroque	Private Stock × Follies	W. Savage (Richella)
Charity	Private Stock × Honcho	W. Savage (Richella)
Dance Review	*ornithorhynchum* × *crispum*	Everglades
Flash	Ducky × Natalie Warford	W. Savage (Richella)
Jeneal Megan Olivas	Savanna La Mar × *cheirophorum*	D. Olivas
Maggie Khoo Seangtee	Tom Wilson × Baby Davelyn	Ooi Kok Thye
Memoria Ralph Reddick	*hyphaematicum* × Illustre	Everglades
Menuet	*bifolium* × *flexuosum*	Marcel Lecoufle
Robsan's Bouquet	Passionata Red × Tom Wilson	R. Perreira
Rosaleu	Santa Rosa × *leucochilum*	H. Rohrl
OTAARA		
French Brandy	*Ctna.* Brandi × *Blc.* Frenchy's Gros Pet	D. Neuendorff
PAPHIOPEDILUM		
Ambassador of Orchid	*rothschildianum* × Amanda	H. Doll
Angela Wilson Booth	Susan Booth × Angela Wilson	F. Booth
Banjarmasin	*javanicum* × *virens*	A. Mochizuki
Banpresto	Faire-Maud × Nettie McNay	A. Mochizuki
Belle Royale	Calke Abbey × Paeony	F. R. Haynes
Billy Booth	Billy Cardalino × Susan Booth	F. Booth
Bonn City	Mendocino × Lunar Orbit	H. Doll
Bonn Star	*rothschildianum* × Greenstede	H. Doll
Brown Derby	Via Fuerte × Via Figueroa	Cal-Orchid (Gallup/Stribling)
Buff Hunk	Demura × *hirsutissimum*	D. Pulley
Calke Abbey	Belladene × Silvara	F. R. Haynes (Ratcliffe)
Cats Eye	Starry Sky × Maudiae	A. Mochizuki
Cherokee Chief	Procrustes × *rothschildianum*	L. Wish (Orchid House)
China Doll	Prime Child × *concolor*	H. Doll
Chita Mellow	Robert Chrisman × William Sanders	T. Takimoto
Desert Storm	Wellesleyanum × Tangold	O. Viengkhou
Diecidue Booth	*glanduliferum* × Gary Romagna	F. Booth
Dixon Doll	Memoria Jack Dixon × Inca	H. Doll
Dixon World	Memoria Jack Dixon × Small World	H. Doll
Doktor Karlheinz Senghas	*philippinense* × Vanguard	H. Doll
Doktor Lutz Krüger	Gary Romagna × *adductum*	H. Doll
Dollami	World Frolic × Dixon Gold	H. Doll
Dollerama	Spotglen × Demura	H. Doll
Dollform	World Venture × Hunters Point	H. Doll
Doll Futur	Memoria Jack Dixon × Many Waters	H. Doll
Doll Key	Spotglen × Cholsey	H. Doll
Doll Paar	Blagrose × Redrush	H. Doll
Doll Replay	Chipmandella × Anja	H. Doll
Doll's Bay	World Strength × Thunder Bay	H. Doll
Doll's Compass	Fred Cosanka × Compass	H. Doll
Doll's Little Spotty	Doll Paar × Allendale	H. Doll
Doll's Vision	Dixon Gold × Hunters Point	H. Doll
Dolltime	Fairburn × Peralta	H. Doll
Emily Clay	Montagnard × William Mathews	A. Mochizuki
Evening Glow	*bellatulum* × Zeus	A. Shindo
Fern Flower	Albion × Ano Puddle	D. Pulley
Fine Doll	World Venture × Dixon Gold	H. Doll
Gary Booth	Gary Romagna × Julius	F. Booth
Golden Leo	Miss Faith Hanbury × *rothschildianum*	I. Kojima
Gondolla	Many Waters × Greenstede	H. Doll
Green Park	Diversion × Todd Clark	I. Muramatsu
Hamana Jolly	Hamana Ninos × Jolly Green Gem	Saeki Nurs.
Hamana Med	Lovely Yard × Jolly Meadows	Saeki Nurs.
Hamana Ninos	Via Muchos Ninos × Memoria Arthur Falk	Saeki Nurs.
Hamana Zae	*niveum* × *violascens*	Saeki Nurs.
Happy Chance	*parishii* × Clair de Lune	D. Howard (O/U)
Hayward Booth	Susan Booth × *haynaldianum*	F. Booth
Heather Marie Booth	Jogjae × Prim-n-Proper	F. Booth
High Charles	*charlesworthii* × High Hat	A & P Orch.
Hitachi Aoi	Jolly Green Gem × Via Solista	M. Akai (K. Tokugawa)
Iridescence	Yachiyo Spring × William Mathews	A. Mochizuki
Jack Booth	Susan Booth × Raisin Jack	F. Booth
Jean Francois Pastor	*appletonianum* × *philippinense*	O. Bucher
Jennifer Haynes	Miller's Daughter × Fine Arts	F. R. Haynes

NAME	PARENTAGE	REGISTERED BY
PAPHIOPEDILUM continued		
Jennifer Kalina	*malipoense* × *chamberlainianum*	Fox Valley (T. Kalina)
Jerry Booth	Jerry Spence × *hirsutissimum*	F. Booth
Joanne Booth	Julius × Jogjae	F. Booth
Karen McCubbin	Brownstone × Subtlety	J. McCubbin (Belvedere)
Kona Sunset	High Charles × *armeniacum*	A & P Orch.
Krull's Black Star	*fairrieanum* × Starr Search	M. Haydon (Krull-Smith)
Little Utsunomiya	Caddiana × *spicerianum*	S. Aoyagi
Mark James Booth	*glanduliferum* × Black Stallion	F. Booth
Masako Muramatsu	Memoria Arthur Falk × Dusty Miller	I. Muramatsu
Master Henry	*henryanum* × *mastersianum*	W. Goldner (Antec Lab)
Mauve Garden	Maudiae × Proconsul Garden	Mukoyama (N. Zurcher)
Memoria Alex Allison	Makuli × *concolor*	Florafest
Michaels Grump Booth	Susan Booth × Neeri-Glow	F. Booth
Minnie May	Makuli × *venustum*	A. Mochizuki
Montparnasse	Maudiae × Aquarius	A. Mochizuki
Nikko Magic	Montagnard × Ernest Read	S. Aoyagi
Ocean Wind	Auroreum × *superbiens*	A. Mochizuki
Patricia Booth	Andronicus × Patricia Elting	F. Booth
Pebblepath	Transvaal × *henryanum*	O. Viengkhou
Pink Sky	Lady Isabel × *delenatii*	O. Viengkhou
Po Tree	Yellow Tree × *malipoense*	Stewart Orch. (M. Kimura)
Preston Booth	Susan Booth × Prim-n-Proper	F. Booth
Proconsul Garden	Procrustes × Montagnard	Mukoyama (N. Zurcher)
Puppentanz	*haynaldianum* × *kolopakingii*	H. Doll
Rachael Anne Booth	Lady Isabel × *bellatulum*	F. Booth
Rollasey	Rollright × Wallasey	H. Doll (Engelholms)
Rolleston	Sweet Sunrise × *sukhakulii*	F. R. Haynes
Ron Doll	Rondo × Fred Cosanka	H. Doll
Running Tiger	Transvaal × *supardii*	O. Viengkhou
Saint Angela	Saint Swithin × Angela Wilson	F. Booth
Saint Armel	Saint Swithin × *armeniacum*	F. Booth
Saint Francis Caracciolo	Saint Swithin × Billy Cardalino	F. Booth
Saint Patricia	Saint Swithin × Patricia Elting	F. Booth
Saint Philip Neri	Saint Swithin × Neeri-Glow	F. Booth
Saint Speratus	Saint Swithin × Jerry Spence	F. Booth
Shardlow	Winston Churchill × Mazalin	F. R. Haynes
Shirley Tomlinson	Glowyn × Amanda	F. R. Haynes
Snow Lynx	Susan Tucker × *godefroyae*	O. Viengkhou
Sonador Moon	Via Sonador × Golden Moon	A & P Orch. (O/U)
Spring Moon	Pinocchio × *micranthum*	A. Shindo
Spring Wind	*glaucophyllum* × Makuli	I. Muramatsu
Strath Spring	Lovely Land × Memoria Doctor Tsuchiya	Mukoyama
Sweet Poison	Alma Gavaert × Memoria Allegria Gutierrez	A. Mochizuki
Sweet Spot	Chiara × Auroreum	A. Mochizuki
Triple Crown	Ernest Read × *hookerae*	A. Mochizuki
Tyke	*henryanum* × *barbigerum*	Paphanatics
Uxmal	Minster Lovell × Redstart	A. Svoboda
Via Ace Dance	Hellas × Cinderella	T. Ozawa (Gallup/Stribling Int.)
Via Fuerte	Maginot × Brownly	Cal-Orchid (Gallup/Stribling)
Vincent Michael Booth	Susan Booth × Gary Romagna	F. Booth
Vintner's Moon	Sonador Moon × Vintner's Treasure	A & P Orch. (O/U)
Virginia Creeper	*barbatum* × *acmodontum*	A. Mochizuki
Weeping Cross	World Beater × *sukhakulii*	F. R. Haynes
White Slipper	Jack Tonkin × Green Mystery	I. Muramatsu
Wössner Goldmarie	*armeniacum* × *victoria-mariae*	F. Glanz
Wössner Tigerbell	*bellatulum* × *tigrinum*	F. Glanz
PAULARA		
Enzomondo Star	*Kgw.* Yuthayong Beauty × *Dtps.* Rosina Pepe	Enzomondo
PHAIUS		
Fragrant Peacock	*longicruris* † × *wenshanensis* †	Liu Fang-Yuan
PHALAENOPSIS		
Acajou	*viridis* × *corningiana*	L. Vincent
Alta Diamond	Paul Acker × Cloud City	Rod McLellan Co.
Bavarian Big Bertha	Mad Hatter × Bavarian Delight	W. H. Kaiser
Bavarian Spots	Carmela's Spots × Astoria	W. H. Kaiser
Bavarian Winter	Bridesmaid × Winter Frost	W. H. Kaiser
Bellatrix	Antarctic × *violacea*	H. Wallbrunn
Brother Amar	Ho's Amaglad × *amabilis*	Brother
Brother Apricot	Hilo Lip × *venosa*	Brother
Brother Candytuft	Brother Grape × *equestris*	Brother
Brother Cupid	Eye-Catcher × Penang Queen	Brother

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Brother Danseuse	Brother Mirage × Carmela's Spots	Brother
Brother Horace	Brother Glamour × *amboinensis*	Brother
Brother Juno	Brother Fairy × Chiayi Spot	Brother
Brother Lawrence	Taipei Gold × Deventeriana	Brother
Brother Liata	Brother Glamour × Carmela's Pixie	Brother
Brother Nugget	Taipei Gold × Brother Imp	Brother
Brother Passat	Taipei Gold × Brother Knight	Brother
Brother Polder	Plantation Polkadot × Elise de Valec	Brother
Brother Purple	Golden Peoker × Brother Glamour	Brother
Brother Stage	Taipei Gold × Golden Amboin	Brother
Buena Rita's Delight	Sweet Memory × *violacea*	Leucadia (J. Ewing)
Carol Cochran	Mambo × Mad Hatter	G. Daubenspeck (O/U)
Celia Marks	Orchid Lady × Illini Star	S. Nisbet
Christina Weltz	*gigantea* × *javanica*	S. R. Weltz
Clara Schuman	Mahalo × Tabasco Tex	B. Woodson
Claudio Arrau	Golden Liz × Bamboo Baby	B. Woodson
Dollrosi	Elisa × Thomas Dankmeyer	H. Doll
Donna Goo	Mahalo × Cherokee Chief	E. Goo
Elven Windsong	Royal Kathleen × Windsong's Fairie	Windsong
Enzomondo Sole Mio	Miami Sunrise × Zora Amato	Enzomondo
Everglades Rocket	Mok Choi Yew × Faith Leebell Cowden	Everglades
First Class	White Cay × Su's Red Lip	Akatsuka Orchid Co.
Freckled Cherub	Rainbow Chip × French Delight	B. Kerber (Carmela)
Gem Leopard	Brother Gem × Plantation Polkadot	Brother
George Short	Lupe Ibarra × Goldiana	M. Rathbone (Paradise [SA])
Gold Prima	Golden Pride × Prima	Owens Orchids (O/U)
Green Canyon's Lisa	Merrie Melody × *stuartiana*	P. Croezen
Ice Maiden	Lois Weaver × Antarctic	Alberts/Merkel
Java Paris	*javanica* × *parishii*	Hou Tse Liu
Jewely Night	Hinamatsuri × Su's Red Lip	Akatsuka Orchid Co.
Julie Goo	Nancy Gordon × Deventeriana	E. Goo
Kamouraska	Rossignol × DuPage	R. Girouard
Karen Dörnbrack	Hello Dolly × Harlequin	M. Rathbone (Paradise [SA])
Kathy Keeper	Carmela's Spots × Tropical Pink	Carmela
Kyoko Matsuzaki	*stuartiana* × Carnival Pride	N. Mochizuki
Lasting Memory	Caitlin × Hausermann's Goldcup	H. P. Norton
Leucadia Lava	Cordova × Deventeriana	Leucadia
Leucadia Lava Flow	Cordova × Green Mist	Leucadia
Leucadia Orange Peel	Cordova × Livingston's Dazzle	Leucadia
Leucadia Red Pepper	Sierra Buddha × Green Mist	Leucadia
Linda Grainger	*equestris* × *inscriptiosinensis*	L. Vincent
Little Cherry	Little Mary × Hinamatsuri	Akatsuka Orchid Co.
Little Paula	Paula Hausermann × *amabilis*	Akatsuka Orchid Co.
Little Song	Dawn Song × *stuartiana*	Akatsuka Orchid Co.
Little Strawberry	Paifang's Queen × *equestris*	Nan Kung
Love Hunter	Dawn Hunter × Abendrot	Akatsuka Orchid Co.
Mahe	*gigantea* × Tierra Rojo	H. Wallbrunn
Malvarosa Crystal	Crystal Harmony × Moon Festival	Malvarosa
Malvarosa Dame	Managua × Dame de Coeur	Malvarosa
Malvarosa Flor Rayada	*schilleriana* × Flor Rayada	Malvarosa
Malvarosa Moon Lady	Moon Festival × Dame de Coeur	Malvarosa
Malvarosa Noble White	*amabilis* × Noble White	Malvarosa
Malvarosa Pink Festival	Schweitzie's Pink × Moon Festival	Malvarosa
Marsha Carol	Memoria Thekla Johnson × Hamptons Pride	Colourfull Nurs.
Memoria Edith Weymouth	Hawaiian Memory × Deventariana	Pleasant Valley (Carmela)
Memoria Mark Hurner	Comanche Rose × Abendrot	J. Romans
Memoria Phyllis Dorsey	Frank Gottburg × Classic Carmela	A. Borello
Michel Dominik	Claude Monet × Spitzberg	Marcel Lecoufle
Mivachic	Barbara Moler × Kyrielle	Michel Vacherot
Min-Chao Yeo-Man	Brother Yew × Yungho Princess Gelb	C. N. Wan
Morning Windsong	Abendrot × Magdalene Acker	Windsong
Navajo Sandstone	Stock's Red Genes × Flor de Mato	A. D. Stock
Norman's Valour	Cherryvale × Lois Weaver	Alberts/Merkel
Ng Ju An	Clementi Pink × Lipperose	David Lim
Ng Ju Mei	Chiali Freed × Music	David Lim
Orchid Lady	Terdoreen × Gladys Read	S. Nisbet (O/U)
Orangegate	Rice Cracker × Dragon's Fire	John H. Miller
Patience	Sandy McLane × *amboinensis*	John H. Miller (McLane Orch.)
Phurplefetti	*philippinense* × *violacea*	John Hutchinson (J. Ewing)
Pimlico Bells	Golden Bells × Hausermann's Goldcup	H. P. Norton
Pisgah Glory	Zauberrose × Alice Gloria	Owens Orchids
Precious Pink	Flor de Niebla × Baile de Gala	R. Steudlein (Stewart Orch.)
Rae Weisman	Illini Star × Ibis	S. Nisbet
Ramona Short	Malibu Guide × Spitzberg	G. Short (O/U)

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Rigel	*amboinensis* × Nancy Mason	H. Wallbrunn
Robert Combremont	*cornu-cervi* × *fuscata*	L. Vincent
Roman Dawn	Ida Fukumura × Roman Bonanza	J. Romans
Roman Dusk	Golden Buddha × Ida Fukumura	J. Romans
Roman Glory	Hawaiian Glory × Capeline	J. Romans
Roman Spice	Golden Buddha × African Queen	J. Romans
Roman Sugar	Memoria Dorothy Palmer × *venosa*	J. Romans
Roman Sunset	Red-Hot Chili × Ida Fukumura	J. Romans
Roman Talisman	Golden Gift × Habsburg	J. Romans
Romantic Elise	Su's Red Lip × Elise de Valec	Akatsuka Orchid Co.
Rong Guan Amboin	Rong Guan Buddha × *amboinensis*	Rong Guan
Rong Guan Flare	Spica × Rong Guan Buddha	Rong Guan
Rong Guan Peacock	Paifang's Queen × Rong Guan Beauty	Rong Guan
Rong Guan Redeye	Paifang's Queen × Rong Guan Leopard	Rong Guan
Rong Guan Spot	Rong Guan Leopard × Golden Amboin	Rong Guan
Rong Guan Veil	Rong Guan Leopard × Rong Guan Stripe	Rong Guan
Seletar Little Leopard	Snow Leopard × *equestris*	David Lim
Silk Stockings	Hilo Lip × Precious Pink	R. Steudlein
Sogo Lit-Angel	Cassandra × Su's Red Lip	Sogo
Sogo Lit-Baby	Modern Stripes × *equestris*	Sogo
Sogo Lit-Cassandra	Cassandra × Little Mary	Sogo
Sogo Lit-Sunny	Sogo Lit-Angel × Timothy Christopher	Sogo
Sogo Red Bird	Paifang's Auckland × Princess Kaiulani	Sogo
Sohma's Gem	Martha's Gem × *equestris*	M. Soma
Sohma Happiness	Suziana Wijanto × San Luca	M. Soma
Soroa Barcarolle	Abendrot × Double Delight	Soroa
Soroa Concerto	Mount Dora × Abendrot	Soroa
Soroa Fantasy	Tami Okuda × Carmela's Spots	Soroa
Soroa Firegirl	Welcome Line × Soroa Romance	Soroa
Soroa Golden Glory	Maraldee × Hakalau Queen	Soroa
Soroa Golden Sunset	Maraldee × Abendrot	Soroa
Soroa Gold Mine	Orglade's Lemon Dew × Maraldee	Soroa
Soroa Lemon Blush	Orglade's Lemon Dew × Abendrot	Soroa
Soroa Marionette	Carnival Moon × Tami Okuda	Soroa
Soroa Pizzazz	Rousserole × Ida Fukumura	Soroa
Soroa Prelude	Ida Fukumura × Danse	Soroa
Soroa Promenade	Ryne Zimmerman × Welcome Line	Soroa
Soroa Rhapsody	Double Delight × Ida Fukumura	Soroa
Soroa Ruby Kiss	*equestris* × Ryne Zimmerman	Soroa
Soroa's Monarchy	Line Renaud × Hakalau Queen	Soroa
Soroa Sonata	Soroa Romance × Devon Michele	Soroa
Soroa Sun Rays	Orglade's Checkered Flag × *amboinensis*	Soroa
Soroa Tapestry	Yolanda Josefa Wever × Orglade's Checkered Flag	Soroa
Soroa Torchlight	Fifi × Ryne Zimmerman	Soroa
Soroa Treasure	Tami Okuda × Double Delight	Soroa
Stellar Tex	Stellar Beauty × Tabasco Tex	B. Woodson
Stock's Red Genes	Golden Buddha × Tropical Violet	A. D. Stock (O/U)
Stone Nova	Stone House × Stone Song	Chen Gee-En
Stone Spring Ball	Fortune Buddha × David Lim	Chen Gee-En
Susan Harry	Florida Snow × Viola Matthews	Zuma Canyon (Krull-Smith)
Swamp Fox	Julia Wilson × Orchidview Headliner	H. P. Norton
Taisuco Adian	Taisuco Kochdian × Atien Kaala	W. H. Chen
Taisuco Amy	Darling Taiwan × Golden Amboin	W. H. Chen
Taisuco Atienyuki	Atien Kaala × Yukimai	W. H. Chen
Taisuco Bird	Freed's Rainbow × *equestris*	W. H. Chen
Taisuco Cardinal	Pinlong Cardinal × China Best Girl	W. H. Chen (Chin-Shang Jean)
Taisuco Cloudian	Hawaiian Clouds × Taisuco Kochdian	W. H. Chen
Taisuco Crane	Taisuco Windian × Taisuco Kaaladian	W. H. Chen
Taisuco Dot	Brother Canary × Cindy Tsai	W. H. Chen (O/U)
Taisuco Dwarf	Taisuco Gaster × Martha's Gem	W. H. Chen
Taisuco Fantasy	Chih Shang's Stripes × Taisuco Minho	W. H. Chen
Taisuco Fengrose	Taisuco Yuhfeng × Taisuco Abenrose	W. H. Chen
Taisuco Hinapink	Hinamatsuri × Taisuco Lienhung	W. H. Chen
Taisuco Magic	Taisuco Eagle × Taisuco Gaster	W. H. Chen
Taisuco Nasubula	Atien Nasu × Nebula	W. H. Chen
Taisuco Silver	Taisuco Windian × Nebula	W. H. Chen
Taisuco Swan	Taisuco Kochdian × Taisuco Kaaladian	W. H. Chen
Tiny Berries	Berries 'n Cream × *equestris*	T. Larkin
Via Eric Smith	Golden Amboin × Moon Festival	John E. Wilson (Gallup/Stribling Int.)
Via Goldmine	Zuma Violet × Amborider	P. van Adrichem (Gallup/Stribling Int.)
Via Southcoast Sunrise	Tabasco Tex × Deventeriana	South Coast (Gallup/Stribling)
Viola Matthews	Donald Rigg × Jimmy Hall	Zuma Canyon (Krull-Smith)

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Voelker's Pride	Gallant Beau × Dianne Burton	E. Voelker
Warm Dream	Buena Flora × *equestris*	Hou Tse Liu
Wild Zebra	Pink Zebra × Golden Buddha	T. Larkin
William Schuman	Tabasco Tex × Snow Leopard	B. Woodson
Wim Cornelissen	Barbara Moler × Alaska Sunset	H. van Hoof
Windsong's Berries	Berries 'n Cream × Windsong's Gem	Windsong
Windsong's First	James Moses × Jim Frederick	Windsong
Wonder Love	Carmela's Wonder × *stuartiana*	Akatsuka Orchid Co.
Wössner Orchid Princess	Orchid World × Princess Kaiulani	F. Glanz
Wössner Purpurstern	Mahalo × Zuma Scamp	F. Glanz
Zephyr Windsong	Zada × White Friar	Windsong
Zuma Bantam	Petite Snow × *amabilis*	Zuma Canyon
Zuma Drama	Spotshine × Double Delight	Zuma Canyon
Zuma Polkadot	Carmela's Spots × Poco's Gal	Zuma Canyon
PHRAGMIPAPHIUM		
Charming Daughter	*Phrag. longifolium* × *Paph. henryanum*	N. Toyoshima
PHRAGMIPEDIUM		
Emerald Fire	Calurum × *boissierianum*	Baker & Chantry
Franz Glanz	*richteri* × *besseae*	O. Gruss (F. Glanz)
Harbinger's Grasshopper	*wallisii* × *boissierianum*	Harbinger (O/U)
**POOLEARA (Polra.)*		
Lester	*Dres.* Dark Beauty × *Asctm. curvifolium*	H. Wallbrunn
POTINARA		
Atomic Fallout	*Blc.* Waikiki Gold × *Slc.* Wendy's Valentine	D. Neuendorff
Atomic Mushroom	*Slc.* Tangerine Jewel × *Blc.* Erin Kobayashi	D. Neuendorff
Bob Pero	*Blc.* Bouton D'Or × *Pot.* Lakeland	Stewart Orch.
Chyong Guu Crown	*Pot.* Chyong Guu Canary × *Blc.* Toshie Aoki	C. F. Tsao
Double Whammy	*Pot.* Esther Costa × *Blc.* Oconee	D. Pulley
Duh's Pride	*Blc.* Manteo × *Pot.* Golden Regal	S. C. Duh
Duh's Wisdom	*B. digbyana* × *Pot.* Golden Regal	S. C. Duh
Hide Akatsuka	*Slc.* Dizac × *Blc.* Volcano Gold	Akatsuka Orch. Gdns.
Mothers Reflection	*Pot.* Gordon Siu × *Blc.* Mount Sylvan	Don Massey
Pirika	*Pot.* Sweet Sugar × *C.* Walkerinter	I. Shimizu
Princess Koko	*L. pumila* × *Pot.* Splendor Ghyllark	K. Taguchi
Waikiki Ula	*Pot.* Manu Ula × *Blc.* Waikiki Sunset	Wen-Chung Hong
Wendy Bon	*Blc.* Bonalbo × *Slc.* Wendy's Valentine	Don Massey
PROPETALUM		
Kiwi Alf	*Pptm.* Mathina × *Prom. xanthina*	R. Tucker
RENANTHOPSIS		
Enzomondo Gemma	*Phal.* Doris × *Ren. imschootiana*	Enzomondo
Kay Redfern	*Phal.* Micro Nova × *Ren.* Brookie Chandler	H. Wallbrunn
RHYNCHORIDES		
Lim Ee Lim	*Aër.* Amy Ede × *Rhy. coelestis*	Lim Ee Lim
RODRICIDIUM		
Bold	*Rdcm.* Spicey × *Onc.* Fiesta Gold	W. Savage (Richella)
Elite	*Rdcm.* Ripping × *Onc.* Tender Love	W. Savage (Richella)
Memoria Frederick Reppun	*Onc.* Gypsy Beauty × *Rdcm.* Phyllis	R. Perreira
SARCOCHILUS		
Kirra-Lea	Heidi × *fitzgeraldii*	Greg Field
Sherlock	Pinky × *hartmannii*	W. J. Harper (Sherlocks Orch.)
SOPHROCATTLEYA		
Hawaiian Beau	*Sc.* Beaufort × *C.* Hawaiian Friendship	H & R
Royal Beau	*C.* Princess Bells × *Sc.* Beaufort	H & R
SOPHROLAELIOCATTLEYA		
Denise Vivant	*Slc.* Kagaribi Dawn × *Sl.* Orpetii	Dogashima
Future Dream	*Lc.* Leeana × *Soph. coccinea*	T. Yuhora (O/U)
Jean Kellogg	*C.* Dubiosa × *Slc.* Vallezac	Sea God Nurs.
Lady Kazuko	*Slc.* Future Dream × *C. walkeriana*	T. Yuhora
Marilyn Ann Miller	*Lc.* Kauai Solstice × *Slc.* Madge Fordyce	D. Olivas
Peaches and Cream	*Slc.* Helen Veliz × *C.* Wolteriana	Sea God Nurs.
Rebecca Organo	*L. milleri* × *Slc.* California Apricot	Rod McLellan Co.
Soldier's Sunset	*Slc.* Tangerine Jewel × *Lc.* Scarlet Imp	D. Neuendorff

NAME	PARENTAGE	REGISTERED BY
SOPHROLAELIOCATTLEYA continued		
Yokosuka Sunset	*L. anceps* × *Slc.* George Hausermann	Takejiro Saito
STANHOPEA		
Grad Nite	*oculata* × Assidensis	D. Pulley
June Bride	*panamensis* × Assidensis	D. Pulley
TRICHOCENTRUM		
Bryon Rinke	*fuscum* × *albo-purpureum*	B. Rinke (Richella)
TRICHOPILIA		
Evaline	*tortilis* × *coccinea*	Hoosier (Great Lakes)
**VACHEROTARA (Vach.)*		
Roquebrune Star	*Ctna.* Keith Roth × *Roth.* Diademe	Michel Vacherot
VANDA		
Claudia Piedrahita	Dona Isabel Bosch × *sanderiana*	R. F. Orchids
Debbi Grodnick	Kasem's Delight × Antonio Real	R. F. Orchids
Freda Greenbaum	Fuchs Blush × Dona Rome Sanchez	R. F. Orchids
Fuchs Purple Platter	David Gardner × *coerulea*	R. F. Orchids
Janet Sykes	Intan × Fuchs Delight	Lim Kong Wing (Wong Kok Thye)
Kevin's Blue	Lucky Chip × Potent	W. J. Harper (Sherlocks Orch.)
Lucky Chip	Chumpee × *coerulea*	W. J. Harper (T. Orchids)
Naomi Honig	Chindavat × Dona Rome Sanchez	R. F. Orchids
Potent	Potenciano × Soonthorn	W. J. Harper (T. Orchids)
Thow Pee Yen	Intan × Gordon Dillon	Ooi Kok Thye
Trudi Pollack	Faye Bennett × Fuchs Rosy Charm	R. F. Orchids
VASCOSTYLIS		
Fuchs Delicado	Rasri Gold × Five Friendships	R. F. Orchids
VAUGHNARA		
Linda Dawson	*Bc.* Star Ruby × *Epi. cordigerum*	B. Thoms
VUYLSTEKEARA		
Friendship	*Odtna.* Memoria Norwood Schaffer × *Vuyl.* Purple Passion	Everglades
WILSONARA		
Blazing Lustre	*Onc.* Illustre × *Oda.* Red Cougar	Mukoyama (Geyserland)
Dottie Denton	*Onc.* Tai × *Oda.* Stromar	Everglades
Fisheating Creek	*Onc.* Auntie Bea × *Oda.* Arlington	Everglades
Florida Fun	*Onc.* Francisco Pons × *Oda.* Red Cougar	Everglades
John Hainsworth	*Odcdm.* Goodale Moir × *Oda.* Lingway	H. Rohrl
Lillian Padgett	*Wils.* Jean Du Pont × *Onc.* Illustre	Everglades
Native Girl	*Wils.* Bubba Mock × *Onc.* Illustre	Everglades
Tim Polovina	*Wils.* Bubba Mock × *Onc. maculatum*	Everglades
Triple Crown	*Oda.* Red Cougar × *Wils.* Kendrick Williams	Cal-Orchid (Geyserland)
WITHNERARA		
Ash Trees	*Mpsa.* Sandy Gibson × *Odcdm.* Tiger Butter	Everglades (George Black)
YAMADARA		
Guateque	*Eplc.* Mi Amigo Jose × *B. nodosa*	J. Izquierdo (Hoodview)
Helmintoller	*Blc.* Orange Nuggett × *Epi. alatum*	W. Farone (K. West)

* New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Pooleara (named in honour of Lester Poole of Florida USA) = *Ascocentrum* Schlechter × *Ascoglossum* Schlechter × *Phalaenopsis* Blume × *Renanthera* Loureiro
Vacherotara (named in honour of the Vacherot family) = *Brassavola* R. Brown × *Broughtonia* R. Brown × *Cattleya* Lindley × *Epidendrum* Linnaeus × *Laelia* Lindley × *Sophronitis* Lindley

† Species appearing for the first time as parents in registration:-
Angraecum leonis; Cirrhopetalum auratum; Cirrhopetalum campanulatum; Dendrobium arcuatum; Dendrobium subclausum; Maxillaria tenuifolia; Phaius longicruris; Phaius wenshanensis

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Reprinted from "The Orchid Review" U.K.

Seed Maturation Research Conclusions

by C.D. Moulton

Seed Maturation Time Laeliinae

Chadam has done various studies of seed maturation under a variety of conditions over the years. What we discovered is that the "conventional wisdom" is, as usual, faulty.

Green pod culturing can save quite some time in many instances, but the considerations in other ways makes us wonder if it's really worth it.

Chadam often purchased flasks and compots from commercial growers for use in our tests until recently. We now have our own studs and a method of growing stock we feel to be far superior to most of what's on the market.

"With the *Cattleya alliance*, allow 150 days for taking green pods . . ."

That is directly from an advisory pamphlet we received. It led to this study.

It ain't that simple chilluns!

Many epis, diacriums, *Brassavolae*, and others will often dehisc before 150 days. *Rhyncholaelia* isn't nearly ripe enough.

Another factor: Many of the flasks and compots we purchased were badly infected with virus.

The seed, IF RIPENED ON THE PLANT, does not carry virus. Green pod seed DOES carry virus.

We will discuss alternatives.

Greenpod or not?

The reasons for taking greenpods are to save time and trouble. There is seldom need to sterilize seed if it is taken from a green pod as most bacteria and fungi do not penetrate into the capsule (It is NOT really a pod) among the seed. USUALLY.

Sometimes there is contamination, so we recommend sowing more than one flask of a cross, just in case.

Carefully sterilize the outside of the capsule before opening it. Soak the UNOPENED capsule in pure Clorox for three minutes. Sterilize tools and blades before use.

If there is any chance the plant that carried the capsule has virus, do NOT do a greenpod culture. Doing a greenpod will ensure most, if not all, the plants will have virus.

If the mother plant has virus, you may allow the capsule to ripen and dehisc (split) on the plant. Tie a small unwaxed brown paper bag around the capsule when it begins to yellow and you will save all the seed.

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We believe the process one uses in sterilizing ripe seeds eliminates virus on the surface of the seed. A natural barrier stops virus from entering the seed itself.

Now we must determine when seeds are ready for greenpod – or when they will ripen on the plant.

Research

I will first make a list of just a small portion of the research. It is fairly self-explanatory, but I will analyze it later. It is from a page selected at random that contains the important features.

M0111100: *Lc.* Chadam Blue Blush 'A' X *C.* Henrietta Japhet 'Lines'
Cross date: 2/22/93
150: 7/22/93
Taken: 5/9/93
85 days: 1025 hr.
Seed condition: Excellent.

M1111000: *Diaca.* Chastity 'A' X *Lc.* Princess Margaret 'The Prince'
Cross date: 3/27/93
150: 7/1/93
Taken: 5/18/93
61 days: 472 hr
Seed condition: Good.

M0001100: *Bc.* Deesse 'Charles' X *Lc.* Lorraine Souto 'B'
Cross date: 1/24/93
150: 6/23/93
Taken: 5/22/93
130 days: 1555 hr
Seed condition: Very green.

S0011110: *Lc.* Blue Boy 'Sarasvati' X *Lc.* Peggy Huffman 'Dave's'
Cross date: 10/6/93
150: 3/5/94
Taken: 2/21/94
123 days: 1475 hr
Seed condition: Excellent.

S1010000: *Lc.* Earl J. Small 'Irene' X *Blc.* Don Me Michaels 'Razzamatazz'
Cross date: 1/24/94
150: 6/8/94
Taken: 6/4/94
146 days: 1740 hr
Seed condition: Very good.

V11000001: *Bc.* Del Rosa 'Lines' X *C. bowringiana* 'A'
Cross date: 11/19/73
150: 4/18/94
Taken: 4/18/94
150 days: 1800 hr
Seed condition: Very green.

W0010000: *Lc.* Blue Boy 'Sarasvati' X *B. digbyana* 'True Green'
Cross date: 10/17/93
150: 3/17/94
Taken: 3/7/94
129 days: 1550 hr
Seed condition: Excellent.

W0110001: *B. digbyana* 'Shapely' X *Blc.* Green Fantasy 'Dave's'
Cross date: 12/1/93
150: 5/2/94
Taken: 5/11/94
161 days: 1930 hr
Seed condition: Very green.

W1110100: *Blc.* Green Fantasy 'Dv's' X *Blc.* Orange Glory 'Empress'
Cross date: 2/4/94
150: 7/9/94
Taken: 5/23/94
120 days: 1435 hr
Seed condition: Excellent.

That's 9 examples. There were a total of 42 crosses made using 24 parents.

Diaca. Chastity and *C. bowringiana* were ready in 864 hrs, or 72 days. *C.* Henrietta Japhet and *Lc.* Chadam Blue Blush were ready in 1440 hrs, or 120 days. *Lc.* Peggy Huffman was ripe enough in 1980 hrs. or 90 days. *Bc.* Deesse and *Lc.* Earl J. Small need a full 1800 hr, or 150 days. *Lc.* Blue Boy is ready in 1560 hr, or 130 days as is *Slc.* Kauai Red Baron. *Bc.* Del Rosa isn't ripe enough in 180 days, or 2160 hrs and *B. digbyana* needs at least 2280 hrs, or 190 days. *Epi. radicans* and *Enc. tampensis* are in good shape at 1200 hrs, or 100 days. *Ctna.* Hunabu Tribute is ready in 90 days.

Diaca, Chastity and *Epi. radicans* will dehisc before 150 days. *Ctna.* Hunabu Tribute and *Enc. tampensis* will be close.

Bc. Del Rosa and *B. digbyana* are very definitely not yet ready for harvest.

You will have noted the count of "days" will not begin to match what the dates suggest.

That's what the research dealt with.

My previous experience had shown me that the actual number of days has little to do with maturation of orchid seeds. They matured much more slowly in winter. That

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was an easy thing to show with such as Lc. Peggy Huffman, which blooms several times per year.

Temperature and light intensity do their own alterations. That's been a known factor for years, as has water and fertilizer.

My research was to come up with a formula that had practical use to a general hobbyist.

I have a partial success, I think.

Note that the listings give a date of the cross, the date of 150 days, and the date the seed was taken.

The cross date is simply the date on the calendar.

A 150 day date is figured as 1800 hrs, which is 12 hrs X 150 days.

The date the seed was harvested the calendar date.

There is a day:hr listing. It is figured from the formula which will follow.

The seed condition is based on the percent of ripe, viable seeds in the capsule.

We found the better seed was taken after ⅔ of the time to normal pod dehiscence. *B. digbyana* takes almost a full year. *Bc.* Del Rosa can take as long.

Diaca. Chastity has five leaves, *C. bowringiana* 3, *Lc.* Peggy Huffman 2, and *Blc.* Green Fantasy 1.

This does NOT hold true all the way through, but trifoliates take a bit less time than bifoliates, which take less than monofoliates.

It is important to watch capsule yellowing. If it is too premature it may indicate non-viable seed.

Another thing to consider is that greenpod seeds take longer to begin germination than ripened seeds. You may save several months by taking seeds early, but part of it is lost in embryo formation.

I mention this because a process developed by Chadam for growing seed at home with an easy formula stated that germination was in 50 days. We used ripe seeds. It takes 72 days if greenpod culture is used – unless you add hormones.

That's another subject.

We did comparisons at different times of years with the same mother plants and were able to work out a schedule for figuring hours that is very workable. The schedule follows with an example of how to figure it for normal use under normal home conditions.

North of Tennessee, subtract ½ hr. per day in figuring, more for light angle than actual time.

Bear in mind that you will have to allow more calendar time if you have a lot of dark, cloudy days in a given month.

If you use artificial lights, it becomes a matter of the hrs. light is provided, but always allow 8 hrs. of dark per "night" or your plant's health will suffer.

Monthly Hr. Schedule
(Hours per month need to be reversed for the Southern Hemisphere)

Month	hr/day	total
January	11	341
February	12	336
March	13	403
April	14	420
May	14.5	450
June	14.5	435
July	15	465
August	14.5	450
September	13	390
October	12	372
November	11	330
December	10.5	325

Several factors were considered in determining the table, such as temp. variation. Even in a glasshouse, the temperature inside isn't run up to 95 when it's 50 outside.

What follows is an example of how to figure two different crosses. I find a hand calculator and a minute is all it takes.

I made a cross of *Lc.* Vandaletta X *Lc.* Peggy Huffman on December 12.

I've determined that Vandaletta takes 130 days: 1560 hrs.

First, December is 10.5 hr/day.

There are 31 days in December, so take away 12 and you punch:

31-12 = 19
10.5 hrs per day:
19 x 10.5 = 199.5

I discard partials. I write down:

199

Next, I'm working on a 1560 hour cross, so I punch in:

1560
Then: - 199 = 1361
Jan. - 341 = 1029
Feb. - 336 = 684
Mar. - 403 = 281

This is less than April, so divide 281 by the hr/day of April, which is 14 and you get:

20.071

The seed will be ready April 20, if there is no extenuating weather etc.

The next cross is *Lc.* Dingaret X *C. bowringiana.* Dingaret takes 1620 hrs, or 135 days. I made the cross on March 7, so I punch:

31-7 = 24

March is 13 hr/day:

24 x 13 = 312

I punch:

1620-312 = 1308
Apr. -420 = 888
May -450 = 438
Jun -435 = 3

My seed will be ready July 1 if there are no bad days.

Again, this is for greenpod seed culture, not ripe seed. Due to the amount of virus in my studs from a few commercial growers who take no care, I don't grow many of those seeds. I do mostly ripe seed germination now. These tests were to determine when seeds are ready and to discover the day/hr. and mo/hr. factors the home grower may use.

One must experiment on his own to determine when an individual mother is ready. There are some few factors that may help.

As noted, bifoliates tend to take less time to mature than monofoliate types. One may watch the capsule and take the first harvest at 120 days – IF the capsule appears fat and ready to the grower. If the seed is very well developed, he may wish to try the next one on that plant at 100 or 110 days.

If the capsule doesn't "look" as though it's ready, it probably isn't ripe enough. It's better to have the seed fully ripened than too green.

Germination is very low in green seed.

The main lesson learned is that a suggestion that *Laeliinae* seeds are mature at 150 days, as most flasking services suggest, is too broad a statement. It should be heard with caution, if not suspicion.

A basic rule may be suggested, but remember that the traits one looks for are not always visible. I have some bifoliate crosses, such as *Lc.* Chadam Blue Blush, that are NOT bifoliate growers, but that DO follow the rules for bifoliates.

The following is a suggestion. It is not a declaration of established fact. Proceed with caution and err on the side of waiting longer than necessary, not of harvesting green seed.

Trifoliate Catts, *Broughtonia,* Epis, Encyclias, Laelias, Schomburghkias, Diacriums = 72-100 days. Average 90 days.

Bifoliate Catts, Laelias, Sophros, *Brassavolae* (NOT *Rhyn.*) 100-120 days. Average 110 days.

Bifoliate crosses on straight Catts, *Blc, Slc, Lc, Blc,* etc. 120-130 days. Average 126 days.

Monofoliate Catts, *Lc, Blc, Slc,* 130 to 150 days, average 140 days.

Bc, Rhyn, – to 220 days.

It is far better to figure the optimum date and to add 10 calendar days than to chance green seeds. It also ensures better germination.

ALWAYS err on too long a time.

I found the best rule with hybrids is to combine the times for the immediate parents, thus *Bc.* Del Rosa (*B. digbyana,* 220 days, X *C.* Suzanne Hye,

140 days) = 220 + 140 = 360

360/2 = 180 days

Lc. Dingaret (*Lc.* Dinard, 140 days X *Lc.* Princess Margaret, 150 days) =

140 + 150 = 290

290/2 = 145 days

Lc. Chadam Blue Blush (Lc. Verelli, 90 days X Lc. Sallieri, 130 days) =

90 + 130 = 220

220/2 = 110 days.

It works well with all I've tried.

Again, err on the side of waiting longer than necessary.

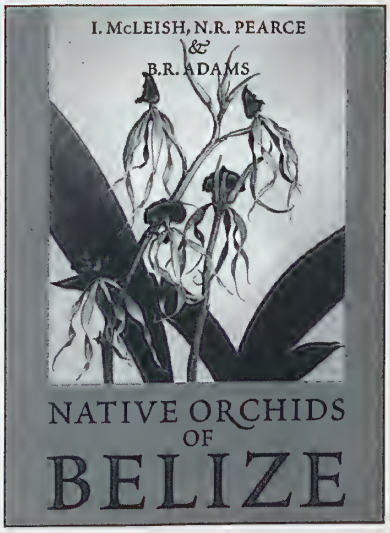
Continues April 1996 AOR

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BOOK REVIEW

Native Orchids of Belize

I. McLeish, N.R. Pearce and B.R. Adams
A.A. Balkema, P.O. Box 1675, 3000 BR Rotterdam, Netherlands
(Fax: +31.10.4135947)
278 pp. Hardcover 285mm x 205mm.
237 colour plates; 120 line drawings.
ISBN 90 5410 609 3
$US95.00



Native Orchids of Belize covers, for the first time, all the orchid species ever recorded in Belize (formerly British Honduras). Belize is part of the Yucatan Peninsula in Central America and faces the Caribbean Sea.

Although this is one of the smaller countries (about one third the size of Tasmania) its orchid flora is extremely rich and diverse. 275 species in 92 different genera. Over 25% of them are commonly known to us in our collections in Australia, and many more in specialist collections. Such well known species as *Arpophyllum giganteum, Brassavola cucullata, B. nodosa, Brassia caudata, B. maculata, Cattleya bowringiana, Chysis bractescens, Cycnoches ventricosum, Encyclia alata, E. radiata, Epidendrum ciliare, Lycaste aromatica, Oncidium sphacelatum, Rhyncholaelia digbyana, R. glauca, Sobralia macrantha* and many more.

The book begins with an excellent Introduction which gives a very detailed description of Belize, its position and physical geography with particular stress on its vegetation. This is followed by Chapter 2 "Classification and key to genera". Bob Dressler's classification (1993) is followed and the key is based on that used by him. It is easy to follow and quickly keys out to the genus one is seeking. Chapter 3 — Species Descriptions — is the meat of the book. The order is Tribe, Subtribe, Genus, Species: a glance through the Table of Contents will disclose the genus required. Where more than one species is involved in a particular genus, an easily understandable key is given to help identify the individual species.

Each genus is amply described together with its etymology. The treatment of each species is good — name, synonymy, description, general distribution, distribution in Belize, habitat, flowering season and how long in flower and etymology.

The superb colour plates, which include many habitat shots, are distributed throughout the work and within easy reach of the corresponding text.

Chapter 4 comprises a checklist of Belize orchids.

In a fold inside the back cover is a large map of the vegetation types, rainfall and heights in Belize.

I consider this a good flora and well worthy of a place on any enthusiast's bookshelf particularly as so many of the species are of great horticultural appeal.

Walter T. Upton

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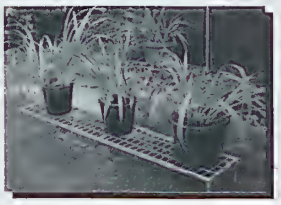
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AOR 123

LETTER TO THE EDITOR

Dear Sir,

Following is a brief experience that you may find newsworthy and serve as a warning to other Orchid Growers.

A Word on Security!

"Never introduce your donor to your pal,"so the quotation goes, likewise, "Never introduce your *Paphiopedilum* collection to a new-found friend!"

Some months ago we started getting close to a young *Paph.* grower (even though other respected growers had warned us against him). Immediately our only mature plant of *Paph. venustum alba* went on the missing list. Somehow we just couldn't believe our new friend was involved and put the incident aside . . . Then one afternoon this friend asked if we had a plant of *Paph. druyii*. It so happened that we did have a three growth plant we had been nurturing for some six years and were expecting it to bloom this year.

Just a week ago our friend suggested we meet him at a Sunday Orchid Auction at 10.00 am . . . strangely he was an hour late . . . Not so strange you might say . . . Well the very next day the *Paph. duryii* went missing also!

Now all this might sound a bit senseless until you realise that we have never had another orchid grower in our *Paph.* house for years . . . Our plants are numbered, not named on the tags . . . We have a Great Dane as security . . . No one in Australia knows the extent of our collection and we keep very much to ourselves . . . Except for our new-found friend . . . We could be excused for thinking that the collection was safe, but at least two very important plants are now gone! I'll leave you to draw your own conclusions as to who the thief was!!!

The important message here is SECURE YOUR COLLECTION and BE VERY CAREFUL AS TO WHO YOU ALLOW IN!!!

Terrence E. Jeff

LOOKING BACK

Fifty-five Years Ago

Volume 6 commenced with a rather sombre editorial from Percy Gilbert. After reporting on the damage by enemy action to orchid nurseries on the continent and in England and the dispatch of pedigreed plants to U.S.A. for the duration, he goes on to wonder if the A.O.R. can survive another year, expressing the hope that the contributors' support will carry it through. With the benefit of hindsight we know all was well.

There was little in the issues to remind growers of the war. An orchid show in aid of the Red Cross and Comforts Fund was held in Newcastle, and the Queensland Orchid Society donated $240 to the Queensland Patriotic Fund being the proceeds of the previously reported orchid show. The overseas advertisers were few, but were still there in the December issue, happily oblivious of what was to come. My eye was caught by the following announcement:

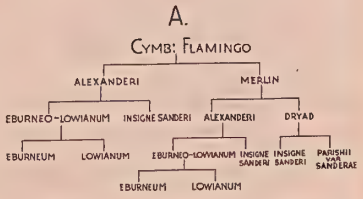
NORTH QUEENSLAND ORCHID & BUSH-HOUSE SOCIETY
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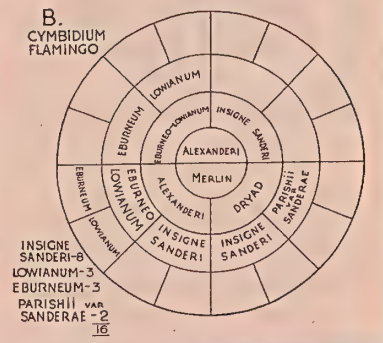
On glancing through the articles in the four issues of the year, one notices the number originating from Queensland. Despite its small population it boasted a Society whose officers included vice-presidents from Coolangatta, Mackay and Cairns. Is it any wonder that, fifty-five years on, Queensland has orchid societies from the border to Mossman and west to Mt. Isa, which host meetings, shows, conferences, etc., to enable their members to fully enjoy their hobby.

J. Murray Cox concludes his "Whys and Ways of Orchid Culture" series with Part 3 — Light. After a lucid explanation of the origin and nature of light he shows the reader how to apply this knowledge to his cultural technique. An understanding of the natural habitat of an orchid should tell the grower that it is a "long-day" or "short-day" plant, thus allowing a modification of light conditions, which should ensure maximum flowering provided the factors dealt with previously, of nutrition, temperature and moisture, are optimum.

C.O. Dunn of Brisbane contributed an admonitory article on recording orchids. Since humanity first learned to write records have been kept and the author points out how essential is the recording of our plants, particularly by the hybridist. He has designed a radial chart which he claims is more useful in showing parentage than the conventional rectilineal one. His charts are reproduced here — what do readers think?

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AOR 051

Cattleyas

Some of our best "catts" are now starting to produce their annual flowering sheaths. Over the next couple of months these plants will produce their beautiful blooms. During the autumn months it is a good idea to place your plants under cover. By doing this you will be able to control the climate around your plants. Once plants come into sheath try not to let water come in contact with the sheath. It is best to water early in the morning so as the sheaths dry out before the cool of the evening.

Watering should be carried out just as the compost dries out. Give plants a thorough drenching when watering. Fertilise weekly. Growers are rather divided on what fertiliser they use on their plants during the cooler autumn months. Many growers only use the organics all through the year with good results. The most popular ones that are used being GARDEN PARTY®, and SPRAYTECHS' FISH EMULSION. Over the last few years K-D-L has been very popular to enhance the size, texture and colour of blooms. In recent times H.S.O. 12 and H.S.O. 22 have been also used with great success especially in the sunshine state.

Scale insects could still be around. If so, spray with ANTISCALE®.

It is a good idea to inspect the root system. If the plant feels wobbly in the pot, pull the plant out of pot and check the roots. If not existent, repot in NEW ZEALAND *SPHAGNUM*. This should help to encourage new roots to emerge from the new bulbs. Remember when using *Sphagnum*, do not over water.

The newly repotted plants can stay in the moss until the plant out grows the pot. Some growers only use *Sphagnum* to grow their catts in. Do yourself a favour and try a few catts in *Sphagnum* next time you are repotting.

Once your autumn flowers come into bloom bring your plants into your living room and enjoy their beauty.

Cymbidiums

The growing season has nearly finished. This means our plants are now getting into flowering mode.

This time of the year is a good time to divide those plants that were not divided during the previous spring. Be very careful that you do not break off those emerging flower spikes. If broken you will have to wait another year for the plants to produce another spike. Try and keep the plant in at least four bulb divisions and try not to disturb the root ball too much. Very important — do not over pot. If you do, the compost will stay too moist too long and this could lead to root rot.

After repotting give the plant a good soaking with a good growth hormone. There are many on the market today. It is a good idea to ask an experienced grower in your area to see what one they use. Many growers like to use WUXAL® as it seems to stimulate growth after repotting. Do not over fertilise until you are sure there is evidence of new growth taking place.

Once your newly divided plants have settled down you can resort to your usual fertilising programme.

Many growers use the autumn months to pot their over grown unflowered seedlings. This means placing the plants into a pot one size larger.

Watering is very important this time of the year. Depending on the area that you reside, you will probably find if you irrigate every four to five days should give your plants sufficient moisture.

Now is the time to fertilise with a lower nitrogen fertiliser such as Horticultural Solutions H.S.O. 12. This is a very well formulated fertiliser designed for flowering cymbidiums. Apply weekly at the recommended rate on packet. The advantage of this fertiliser is that it also contains a balanced amount of calcium in its formulation.

Watch for pests on your plants during autumn. You could have a few remnants of two-spotted mites hiding under the leaves. If present you can spray with one of the following: For the environmentally conscious grower, the use of NATRASOAP®, plus SPRAYTECH OIL® is the way to go. KELTHANE® ROGOR® and OMITE® can also be used. Check plants for scale insects before flowering. If present spray with ANTISCALE®.

Leaf spots can be a problem this time of the year. MANCOZEB® seems to give reasonable results. Many growers like to give their plants regular spray with DACONIL 2787®. Remember when using this product, do not use a wetting agent.

During autumn watch out for root and bulb rot diseases. You can apply FONGARID® or ALIETTE® . . Many growers like to apply RIDOMIL 50G® to the pot.

It is very important to give your plants plenty of air and space to allow the developing spikes plenty of room. It also insures that your spikes will go up and not down or sideways when they hit another pot.

Masdevallia/Dracula

The southernmost states can experience the hottest and driest weather of the year at this time. Northerly winds accompanying high temperatures combined with zero humidity will prove beyond any doubt, that the *Pleurothallidinae* are, in general, orchids of the cooler high altitude rainforests.

The discarding as well as the discoloura-

tion caused by fungus are indications that your culture are not to the plants liking. Reduce temperatures, decrease watering but, increase humidity and air flow.

Particularly at risk are all those *Masdevallia* species within the *Coccineae* section. *Masdevallia coccinea* itself, at this time, develops ugly black leaf tips and even that most resilient and robust species *Masd. veitchiana* can be stressed to the limit. Many within the *Coriaceae* section are also stressed, a typical sufferer being *Masd. angulata* which in the habitat, grows under dull, cool and humid conditions. Make sure all discarded leaves are promptly removed to prevent the build up of fungal/bacterial spores as these leaves break down. Draculas may still try to flower at this time, most blooms will be disappointing as the lack of natural humidity will cause the flowers to collapse as soon as a temperature of 25°C combined with low humidity occurs. Most *Dracula* flowers are at their best at around 14-15°C with a humidity of 65 to 80%. In the habitat it can be as high as 100% R.H. *Dracula* do however, appear to grow very nicely under warm but not excessively hot conditions.

Many *Masdevallia* within the section *Caudatae* will be happy in the increased warmth, e.g. *Masd. prodigeosa, Masd.*



xanthina and *Masd. klabochorum*, but be careful as many in this group are also from cooler, higher altitudes. *Masd. caudata*, as well as the closely related *Masds. wurdackii, discolor, expansa* and *setacea*, will not like the summer heat, *Masds. davisii, amabilis* and *welischii* will, likewise protest, by dropping leaves and loosing roots. Sometimes they die. Remember there are no bulbs/pseudobulbs storing food and moisture to get them going again!

Consider as well the fact that the Andes habitat of many of these species rises so acutely, that, any one species may have a range of habitat, that is not interchangeable. One square kilometre of growing space in these areas may have a vertical variation of hundreds of metres altitude. This in turn, translates to as much as 5°C variation in preferred growing temperature. The temptation to water more than usual to compensate for high temperatures must be resisted as the plants are not growing strongly enough to take up the extra moisture.

Many plants can at this time, be grown under 70% to 80% shade cloth, down low and amongst the foliage of other plants. Some will stay in this position until the cold, wet days of the southern winter arrives. Around the beginning of July is a good time to move the plants under solid cover, WA, SA, TAS, ACT and NSW in the southern areas including Sydney, can follow this advice. Q'land in the cooler areas, such as Toowoomba and the Tablelands, may even stage the plants permanently in an outdoor situation but, bearing in mind that the family is not frost tolerant and thus needs protection from sub zero temperatures. Here in the eastern hills, some 40 kilometres from Melbourne, I grow only the larger mature plants in this outdoor shadehouse fashion, preferring to keep the seedlings under solid cover. During a period of many years of observation, I have found that many species that gave trouble in an enclosure, during the summer, responded more than favourably to the outdoor situation.

All solid cover enclosures may need a re-application of glass house paint at this time, as summer thunder storms, will have by now, reduced much of the effectiveness. 10% addition of milk to the glass house white powder mix, will give better sticking and longevity. Ventilation at this point in time should be at its best, if not, hot humid conditions will result, causing a rapid deterioration of the plants health. Keep an eye on those fans and water coolers as they have a habit of "packing it in" at this time. Frequent misting and damping down will be necessary to reduce temperatures and when this is done, humidity will automatically be increased.

The cooler it is, the more water vapour the air can hold. As in winter, foliage should be dry before the onset of the cooler moist night temperatures. Those growers leaving their plants all day long, should have some type of misting arrangement operating. The most northerly growers will still be operating refridgerative air conditioners in conjunction with some type of humidifying of the dry air.

Until the autumn break occurs, growth, although noticeable, will be slow. Feeding should therefore be infrequent, if at all, until the surge of growth occurs in April through June. Watering MAY be advised on a daily basis, even moss dries out quickly when the air is dry. Bark mixes also need monitoring.

Mounted genera such as *Restrepia* and *Pleurothallis* may need watering or heavy misting a few times per day. Have the slabs on an angle from the vertical, to ensure water remains on the mount and root area, for as long as possible. The temptation to divide should still be resisted at this time and as well, establishing the seedlings from the flask is a risky business until the softer autumn weather arrives. Those growers with complete control can deflask at any time.

High humidity also promotes the build up of algaes on glass and enclosure walls, before the duller weather arrives it may be successfully removed by using a non chlorine based pool algicide, the liquid "Alginox"™ if used too strongly, can pit leaves and burn flowers. I have found a dilution ratio of 5ml per litre of water is affective without harming anything. Spraying is the best method of application.

The algae just dies and goes white within a few days. DO NOT go stronger than my recommendation or you will damage the plants. The active agent in the moderately priced "Alginox" is Benzalkonium Chloride, the same as in "Physan"™. This method certainly beats washing off the algae with bleach!

Slugs and snails, if they are hungry during the dry, will attack tender young growths so beware of them and conduct nightly vigils before retiring for the night. If available use one of the wettable powders such as Mesurol 750® for control. Birds will also steer clear of this compound.

Some of the flying pests also can be a problem, even the white cabbage moth, will give attention to the *Pleurothallidinae*, this insect is able to transmit virus, maybe from your vegetable garden if you are growing beans and there is clover in your lawn. Use a non liquid based systemic such as Orthene® for control. Red spider mite are never a problem if your humidity levels are correct!

Natives

The weather can bring any number of surprises at this time of year. February is often still very hot but there can be cold snaps. By the end of March cool nights are expected over much of the southern growing region for native orchids.

This period sees the final maturing of growths and the appearance of some spring flower spikes — *Dendrobium speciosum* complex and *Sarcochilus falcatus* amongst others. This early development means constant vigilance for nibbling and sucking pests is necessary or there will not be any flowers.

In bloom towards the end of March or soon after will be a range of very attractive natives including *Dendrobium capitisyork* and *D. bigibbum* complex and many hybrids with these species in the parentage, *D johannis, D. rigidum, D.* x *superbiens, D. bowmannii, D. schneiderae, Cadetia* species, *Bulbophyllum weinthalii, B. exiguum, B. shepherdii, B. macphersonii, Liparis reflexa* and *Phalaenopsis rosenstromii*. Take care of those with tropical parentage if you live in cooler climates as sudden cool snaps will result in bud drop. There are now many hybrids which flower in autumn and for extended periods due to *D. capitisyork* and tropical species in the parentage. Some of these are very spectacular and

colourful as well as being tolerant of much cooler conditions than many would expect, although they don't like frosts.

Return any plants to the hothouse if they have been out for summer and check that the heaters are working — they have been known to be needed during these months in Sydney. Leave the shadecloth, or whatever you use, in position for a while yet unless you live in the southern areas where hot sunny days are no longer expected to result in overheating.

General care at this time involves checking that growth has filled pots with roots after potting on. Any plants which have not performed well should be checked now to determine the problem. Tip the plant from the mix and look for pests eating the roots. Slugs, slaters and worms as well as assorted smaller munchers could have been snacking on the roots. If your conditions have changed the problem could be the result of a new position being unsuitable due to too much or too little light, water, fertiliser, air movement. These changes could result from moving or bushhouse renovations or from the growth or removal of nearby trees. In the case of water and fertiliser, are overhead misters prevented from watering a plant due to a shadow created by hanging or larger plants? Or is there too much water for the particular plant due to drips from the hanging plant or a leak in the water pipe? Do you always feed by starting and finishing in the same place resulting in the plants at the end either getting too little fertiliser as it has run out or too much as the last is dumped? Try changing your pattern to even out feeding (and water). Did the new growths get eaten or rot in the hot and humid then cold conditions of summer? Is the plant suited to your climate or does it need special attention? Finally, could the plant be suffering from virus? Sorting out problems and overcoming them might involve a bit of detective work but it is this that make orchid growing interesting at times other than flowering.

Fertiliser can be continued at this time but change from the high nitrogen (N) ones which encourage growth to those which promote flowering, high potassium (K). Remember to keep it well diluted but applied regularly.

Fungal and bacterial problems can be expected to continue in warm and humid weather. Be sure to correctly identify the problem before spraying as the treatments are rather specific.

Hack back the undergrowth beneath benches if it has gone out of control in the hot weather. This reduces the number of places for slugs and snails to hide and the plants will have time to recover before winter. Cleaning up dead material leaves fewer places for bacterial and fungal problems to incubate. It is a good time to deflask seedlings now and for the next month or so in most areas. The weather is warm enough for growth to continue so plants are established before winter. You could always put them in the hothouse for that extra start and move any cool growers out at the start of spring.

Growth of terrestrial orchids should be well underway by now and flowers will be forming in many species and hybrids. Remember that they don't do well with too much water as tubers can rot and heavy overhead water and rain can knock flower stems flat.

Paphiopedilum

The weather is normally hot and, particularly during February, quite humid. If you haven't taken precautions against mealy bug and scale, keep an eye out. Scale usually only becomes a problem in collections which have been neglected and can usually be traced to host plants, often ferns. Mealy bug, on the other hand, can appear almost out of the blue and you can have a major infestation before you notice it. Both these pests can be controlled with 'Malascale'; repeat spraying may be necessary.

Care of Paphs. during this period of the year consists mainly of routine watering and the regular application of soluble fertiliser as advised previously, still taking care to avoid overwatering. When the nights are hot it is better to water during the evening to induce a temperature drop about nightfall; this will assist promote flowering and, in my experience, help avoid deformed flowers.

Excessively high temperatures should be avoided by whatever means you have at your disposal. In the bush house, shading and simple misting of the plants is all that can practically be done; natural air movement usually avoids problems under these conditions.

Glass houses can present problems with excessive heat during summer, particularly if they are small. An adequately sized evaporative cooler is a very useful, albeit costly, device for creating good summer growing conditions in the glasshouse. The cooler must be so installed that it draws fresh air from outside — recirculation is useless. Sufficient ventilation should be provided at the top of the house to ensure that the cooler operates without back pressure. A simple thermostat, set at about 28 degrees Celsius, is sufficient control; this may need to be wired through a relay.

In the absence of an evaporative cooler, summer temperature control is best achieved by a combination of ventilation, shading and misting. Whilst shadecloth over, and some distance away from, the glass helps with cooling — and can conveniently be removed during the cooler months — a thin coat of white paint in addition is almost always necessary. A vinyl water base paint, thinned with three or four times its volume of water, is very suitable. Don't use an Acrylic paint, it is almost impossible to remove.

Phalaenopsis

Potting:- All repotting of flowering size plants should have been completed (and all old flower spikes removed) by December. Small plants can still be potted on and compots potted out.

Watering:- Water daily — preferably in early mornings. If heavy to flood rains occur, keep plants under a solid roof.

Light:- Plants still require about 90% shade at this time of year.

Fertiliser:- Do not fertilise dry plants — always water beforehand. Fertilise weekly alternating over a 4 weekly period as follows —

Wk.1. — Inorganic — Campbells A, Aqua K, etc.

Wk.2. — Wuxal Foliar

Wk.3. — Inorganic — as for Wk. 1.

Wk.4. — Organic — Fish Emulsion, Nitrosol.

The change to lower nitrogen/higher potash inorganic fertilisers is to harden up the plants for winter and promote better flowering.

Pest Control:- Watch for fungus and rot problems. Spray with Mancozeb and Kocide every 4 weeks or alternatively use Ridomil MZ WP which is both surface and systemic fungacide. Spray with Diazanon or Pyrethrum to control scale and insects.

Keep a close watch for mites and spray with a miticide as necessary.

Vandaceous

Watering:- Don't allow to dry out. Water thoroughly every day. In very hot dry conditions water in early mornings and mist again late afternoons.

Light:- Strap leaf vandas, ascocendas and other vandaceous genera with wide leaves require 50% to 70% shade although semi-terete and other narrow leafed types will be quite okay with 30%.

Fertiliser:- Do not fertilise dry plants. Always water beforehand. Fertilise weekly, alternating over a 4 weekly period.

Wk.1. — Inorganic — Campbells A, Flowfeed HP8 or Aqua K.

Wk.2. — Wuxul Foliar.

Wk.3. — Inorganic — as for Wk.1.

Wk.4. — Organic — Fish Emulsion, Nitrosol.

Pest Control:- Fungicide every 6 weeks (e.g. Daconil or Ridomil MZ WP. Use Diazanon or Pyrethrum to control insects.



Cymbidiums Australia



Presented by the Australian Cymbidium Society Inc

Editor's Report

Fame, Gain, or Satisfaction

Happy New Year and welcome to another year of orchid growing. I trust that it will bring a great deal of satisfaction to each and everyone of you.

Have you ever sat down and analysed why you grow orchids? For instance, do you wish to achieve fame, gain, or satisfaction. There is no doubt, all are attainable. However, let me quickly point out that the reasons and levels you set out to reach, will be determined by your very own input — but then, isn't that simply a reflection on every mission we set out to achieve in this life!

Three major articles are featured in this edition of Cymbidiums Australia. Greg Bryant, son of Australia's foremost cymbidium hybridist, Alvin Bryant, is now in charge of the nursery at Bryants Orchids, down in Captain Cook territory at Kurnell, New South Wales. Greg is a well liked and respected identity in the orchid community. His article titled, A Golden Future, is a look at the results being achieved from the breeding done with *Cym.* Coraki 'Margaret' 4N. As Greg quickly points out this is just an overview of the results seen at the nursery.

No doubt much more will be seen and heard about the *Cym.* Coraki 'Margaret' 4N progeny in future articles, as there are some fascinating results appearing from both first and now second generation crosses.

Sanders, Stonehurst and McBeans are names steeped in orchid history. How many of you have rubbed shoulders with someone connected with these great orchid establishments of the past? I have and many of you have too, without knowing it, probably! Clive Halls, a name well known amongst orchid lovers in Victoria, Australia and indeed the world, can lay claim to having worked for all three nurseries.

The Mt. Beenak Story, telling of Clive Halls' exploits, was high on my list of orchid personality profiles — I am sure you will enjoy it as much as I do.

Western Australia is geographically isolated from the more densely populated areas of Australia, yet it too boasts a considerable following of cymbidium lovers — to the extent that a Cymbidium Club was formed last year. Kevin Butler was the instigator of this club, and indeed is one of the West's greatest orchid ambassadors. Owner of Ezi-Gro Orchids, a huge complex, Kevin travels the world looking for new stock. In his article he tells us about the cymbidiums seen on a recent trip to New Zealand — 'Land of the Long White Cloud'. ■

Dean Roesler
Editor

President's Report

Chicken or The Egg

There is nothing like writing about poultry in an orchid journal! When I first started growing orchids in the late 1970s, one of the highlights of the winter was to visit one of the five or six commercial cymbidium nurseries on a weekend, view with awe their plants in flower, and consider how I could eventually emulate such excellence. And of course these visits would be punctuated with the commercial proprietors playing a major role in our premier orchid club. These were exciting times.

Today, a visit to your commercial Australian cymbidium nursery probably would be met with a two metre high fence and a large black dog showing off its dentures. And our orchid clubs have changed — most notably, attendance at monthly meetings has dwindled. Most would probably say, "well they were the good old days and there is no sense living the past".

Yet with the formation of the Australian Cymbidium Society, there must exist a window of opportunity to re-organise the orchid scene. I say that in the knowledge that we have this wonderful orchid journal, and after reading the introduction to a catalogue from an American orchid nursery. I quote:

"Everett Stockstill and the S & S family took us under their wing and together we have changed the old methods of how orchid vendors and orchid societies deal with each other. We are especially pleased to have been part of this revolution".

Here we have the Torrance Cymbidium Society in California, striking up a special relationship with Orchids Limited. Both groups benefit. Torrance today is that bubbling club scene that excited "in the good old days".

The Australian Cymbidium Society has as its charter the promotion of cymbidiums. To achieve this goal, we need to put in place the building blocks of club management and vision. It may mean that our Australian clubs need to contact Torrance and commence dialogue on the revolution that has seen their membership treble over the past three to four years. In doing so, we must always bear in mind, what comes first, "the chicken or the egg".

P.S. The Australian Cymbidium Society has been formally offered $6,000 by an organisation to stage our inaugural National Show on the first weekend of September 1996. Our national committee meets early in 1996 to consider this proposal: whatever, make sure your plants are ready for the first week of September. More about this in the next edition. ■

Graham Guest
President

"CYMBIDIUMS — KING OF THE ORCHIDS"

Club News from South Australia

It would appear that 1995 was the year of the Cymbidium in South Australia. Three of the major clubs saw their Grand Championship prizes awarded to the "King of Orchids". The Orchid Club of South Australia's Grand Champion was won by a red standard seedling, *Cym.* (James Wattie x Yowie Flame) owned by John and Marry Harris — the two bolt-upright spikes carried 18 dark red flowers on each. Colin and Nan Grigg were the proud owners of the South Australian Orchidaceous Society Grand Champion, with their lovely green standard, *Cym.* Valley Zenith 'Top Spot'. And surprise, surprise, another Cymbidium won Grand Champion, this time at the Gawler Districts Orchid Club Spring Show — yet again a seedling, a first flowering standard, of a most unusual rusty/orange colour, *Cym.* (Trigo Royale x Thanksgiving) x Red Beauty owned by Dean and Mary Roesler.



Cym. (James Wattie x Yowie Flame) Owner: John & Mary Harris



Cym. (Trigo Royale x Thanksgiving) x Red Beauty. Owner: Dean & Mary Roesler. Photographer: Eddie Ng, Adelaide, S.A.



1995 Cymbidium of The Year 4th Quarterly Winner

(October/November/December/January)

The Cymbidium Club of South Australia selects its Cymbidium of The Year from four quarterly winners. This is to encourage development of quality Cymbidiums throughout the entire year. Winner of the 4th Quarter is pictured at left.

Cym. Sweet Devon '1103' CE/CCSA, CHB/CCSA Parentage: *Cym.* (*suave x devonianum*) Owner: Keith Northcote, Warradale, S.A. Hybridiser: D.M. Cannon. Photographer: Peter Aigner-Muehler, Salisbury, South Australia.



Ararat the Orchid City

The Ararat Orchid Society Spring Show was held on 27th to 29th October 1995 in the historic Town Hall. Although late in the season it was very successful, with many visitors from throughout Victoria and from interstate.

There were 12 individual displays with varying themes, as well as one club table, also a small display from the large exhibition featured annually in the Parks and Gardens. A total of 33 members exhibited 475 plants from over 20 different genera, mainly cymbidiums.

The show was judged by members of the Orchid Societies Council of Victoria judging panel. The King and Queen of the Golden Gateway Festival opened the show. Trophies were presented by Club Patron Mr Dick Fegley MLC.

Visitors were offered a large sales area, potting demonstrations and free on the spot prize draws. Floral corsages were made and sold throughout the show by Madge Reid, who has being doing this for 15 years. Another milestone was Joy Hayden's 10th year as Show Marshal, keep up the good work Joy. Congratulations to all winners and thanks to all exhibitors for making a great show for the public to come and see.

The Championship winners were:

Champion Orchid — *Cym.* Miss Muffet 'Our Delight' owned by P & L Williams.

Reserve Champion — *Den.* Aya owned by P & L Williams.

Champion Standard Cymbidium — *Cym.* Leopard Lady 'Mary Smith' owned by G & M Jones.

Champion Intermediate Cymbidium — *Cym.* Alison Shaw 'Valentine' owned by R & P Coppin.

Champion Miniature Cymbidium — *Cym.* Miss Muffet 'Our Delight' owned by P & L Williams.

Champion Paphiopedilum — *Paph. hirsutissimum* owned by M & V Kennedy.

Champion Australian Native — *Den.* Ella Victoria Leaney owned by P & L Williams.

Champion Species — *Onc. papilio* owned by L & J Hayden.

Best Display winners were:

Open — P & L Williams

Advanced Novice — A Gardiner

Novice — G & M Jones

Most Creative — J & B Welsh

Jack Pianta
Publicity Officer

STATE EDITORS

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A Golden F

Cym. Coraki 'Margaret

by Greg Bryant

The careful selection of the best Cym. *Coraki 'Margaret' 4N progeny and their use in breeding programs gives cymbidium growers great expectation for a golden future.*

There has been great progress in the development of standard yellow and gold tetraploid cymbidiums. One orchid that is playing an important role in this development is *Cym.* Coraki 'Margaret' 4N. Breeding programs using 'Margaret' 4N are giving superior progeny. The following comments are limited to the experiences with 'Margaret' 4N in yellow standard cymbidium development at our nursery. It would take a series of articles to give a complete overview, because *Cym.* Coraki 'Margaret' 4N has been used in the development of assorted colours in both intermediate and standard cymbidiums, by many hybridisers.

Cym. Coraki was made as a diploid cross and registered in 1967 by Wondabah Orchids — Coraki is the name of a town in northern New South Wales. *Cym.* Coraki 'Margaret' 4N was a colchicine conversion of 'Margaret' 2N. In the early 1980s we obtained clones of *Cym.* Coraki 'Margaret' 4N from Norm Porter in New Zealand.

The properties that make 'Margaret' 4N useful as a parent include:

1) rich yellow to gold segment colour

2) large labellum with red edge and white unmarked throat

3) good size and heavy substance flowers

4) the flowers have superior lasting qualities

5) the free flowering property with bulbs multiple spiking

6) the ability to produce spikes at any time of the year. At our nursery most spikes open in late July to August, however, at the time of writing (mid-October 1995), there is a good length spike of 12 blooms just opening. This property means that 'Margaret' 4N can be used to develop early and late flowering cymbidiums.

The areas where *Cym.* Coraki 'Margaret' 4N needs to be improved include the following:

1) the shape is not circular because the dorsal sepal is not upright — this gives a hooded appearance and rectangular shape overall

2) the flower count is variable — very few spikes carry more than 10 or so flowers. The best our clones have done is 16 flowers (in August 1995) on a long spike. Most spikes tend to be of only average length.

3) column deformities. While it is possible to get spikes free from deformity, 'Margaret' 4N can produce flowers with column deformities. This can be passed on to a relatively small percentage of its seedlings. The deformity is a genetic fault that is expressed more frequently when buds are subjected to high temperatures.

Hybridising should involve the selection of a parent that will enhance the good characteristics, while improving the shortcomings of the other parent. Evaluation of parent plants is possible when we assess the extent to which:

a) desirable traits are expressed and b) undesirable traits are not expressed in the progeny.

Let us evaluate *Cym.* Coraki 'Margaret'



Cym. Coraki 'Margaret' 4N



Cym. Coraki Gold 'Golden Girl' 4N

ıture:
4N hybrids

4N when used with a number of different parents.

The *Cym.* Coraki Gold (Winter Hunt x Coraki) cross has produced a number of very good clones. An example is *Cym.* Coraki Gold 'Golden Girl' 4N. This is a large yellow with big red-edged labellum. The dorsal sepal is fairly upright giving a flat flower that has heavy substance and long-lasting properties. 1995 saw 'Golden Girl' produce a total of 6 spikes (2 spikes per bulb) with 12 to 19 blooms per spike. The first spike opened in mid-May with the last spike opening in late-July. The spike length was very good. 'Golden Girl' has most of 'Margaret' 4N's good points without any of the bad points, and will play a role in the development of early yellow cymbidiums.

Cym. Arcadian Sunrise 'Golden Fleece' 3N is still widely grown as an early yellow cut-flower variety. (The *Cym.* Arcadian Sunrise cross was made by Alvin Bryant in 1970 using *Cym.* Arcadian Melody





Cym. (Winter Advent x Coraki) 'Bullion' 4N



Cym. Surman's Delight 'Patrice' 4N

'Harvest Moon' 4N x *Cym.* Coraki 'Daffodil' 2N. Kevin Black flowered 'Golden Fleece' and registered the cross in 1977). A Dutch grower told us that up to 10% of Dutch cymbidium cut-flower stocks are made up of 'Golden Fleece'.

For many years the search for a variety that is better than *Cym.* Arcadian Sunrise 'Golden Fleece' has been going on, so that early cut-flower stocks can be upgraded.

The replacement for 'Golden Fleece' that we have been waiting for is *Cym.* (Winter Advent x Coraki) 'Bullion' 4N. On its first flowering in June 1994 'Bullion' produced 3 spikes. In 1995, on its second flowering, 'Bullion' produced 4 spikes with the first opening in mid-June and the last opening in early September. Flower count ranged from 8 to 18 blooms per spike. The spikes were long and thick, while the flowers had good size and substance, together with the long life property. 'Bullion' has exceptionally clean, bright yellow to gold colour that does not fade.



Cym. (Coraki x Valya Craig) 'Connie' 4N

The labellum is large with a vibrant contrasting blood red edge. The spike length and colour from the *Cym.* Winter Advent have combined with 'Margaret's' good traits to give the best commercial early yellow that we have seen. 'Bullion' will be part of many cut-flower growers' stock through the early decades of next century.

Although 'Bullion' has many fine points, it lacks the classical show shape. Can *Cym.* Coraki 'Margaret' 4N produce showbench winning shape, as well as the good cut-flower and pot-plant result? The answer to this question is obvious when we look at *Cym.* Surman's Delight 'Patrice' 4N (Tongariro x Coraki). 'Patrice' has the filled-in, round shape required for the showbench.

An area where many yellows need improvement is in the petals, 'Patrice' has the desired wide petals and rounded petal ends. The large labellum has a red edge and compliments the intense yellow colour of the petals and sepals, which have red in





Cym. (Trinity Hall x Coraki) 'Gorgeous' 4N



Cym. (Coraki x Lunara) 'Armada' 4N

their centre. The red pigment in the tepals of 'Patrice' occurs on the 'inside' of the segments and is not staining (which only occurs on the 'outside' of segments). The degree of pigmentation is related to temperatures. In a mild winter 'Patrice' has less red in the petals and sepals, while in a cold winter the red pigmentation is greater, due to increased production of anthocyanins.

A percentage of *Cym.* Coraki 'Margaret' 4N seedlings can show red pigmentation in the petals and sepals and a percentage can also stain due to light levels.

Clean vibrant colours are very desirable for the cut-flower and pot-plant markets. A 'Margaret' seedling that meets this requirement is *Cym.* (Trinity Hall x Coraki) 'Gorgeous' 4N. The August flowering 'Gorgeous' has eye-catching gold colour that is clean and does not fade. The appeal of the flower is enhanced by the large red-vee labellum. The clarity of colour in *Cym.* Trinity Hall has combined with 'Margaret's' brightness to produce a desirable result.

The red-edged labellum (or red-vee) is seen in a good percentage of 'Margaret' 4N's seedlings. An example where very little red occurs in the labellum is the near concolour *Cym.*. (Valya Craig x Coraki) 'Connie' 4N. It has a later flowering time than the other hybrids described. In 1995 the very productive 'Connie' had 11 spikes in a 250mm (10 inch) pot. The bulbs multiple spike with up to 3 spikes per bulb. The spikes carried 8 to 18 flowers, with the first opening in mid-August and the last in mid-September. The spikes were long and strong, although some were thin at the top. An interesting point was that the first flowers to open in August (having developed in cold conditions) had a red dot on the labellum, while the flowers that opened in mid-September (having developed in milder temperatures) had no markings whatsoever in their labellum. 'Connie' should be referred to as a concolour (or near concolour) and not as a pure-colour or albino-type, because the ability to produce red pigment is present. Indeed, *Cym.* Coraki 'Margaret' 4N itself can vary in the amount of pigmentation in the tepals and labellum, depending on the time of flowering.

In conclusion, it is obvious that *Cym.* Coraki 'Margaret' 4N has made some valuable contributions to the development of yellow and gold cymbidiums. Hopefully the role 'Margaret' 4N is playing in other colours will be discussed elsewhere in future articles.

Greg Bryant
22 Cook Street
Kurnell, NSW 2031

PARENTAGE COUNTS:
A New Generation of Hybrids

Lunalvin 'Delilah' is a large show shape green that flowers in August. The labellum is also large and the flowers are well spaced around the raceme. Lunalvin 'Delilah' is proving to be a superior parent. 'Delilah' mericlones and seedlings are offered on our November 1995 List.



Cym. Lunalvin 'Delilah'

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The Mt. Beenak Story

by David Allen

One crisp autumn morning, my wife and I set out to visit Clive and Agi Halls at Three Bridges. It was my first assignment from Dean Roesler, editor of the Australian Cymbidium Society. His instructions were, "Get me the Mt. Beenak story". So armed with my trusty pad and pen we set off towards the Dandenong Ranges and on to the Upper Yarra Valley.

Mr. Beenak Orchids is situated in one of the loveliest areas in Victoria — approximately 20 km from Mt Donna Buang, closest snow-bearing mountain to Melbourne. Clive and Agi chose this area for their nursery, mainly because of the quality and abundance of pure, fresh mountain water. Also for the cool summers and warm winters! — the night before our visit the temperature dropped to –3°C.

When we arrived Clive and Agi were busy getting together the orders they had received from their latest catalogue. The jug was put on, and after a short chat and coffee, it was agreed that the best way to do the interview was to talk while Clive packed the plants.

This is Clive's story:

"My orchid career began in 1963 at Sanders Orchids in England, where I trained under David Sander. I worked there for six years until its demise in 1969 — the end of the Sander dynasty, and I was the last apprentice!



Clive and Agi Halls with youngest daughter Ena.

Following this, I worked for sometime at Stonehurst Orchids under Bert White — an interesting if short lived stay. An opportunity to manage a new collection for David Clulow arose so I took on this challenge involving renovating a very old range of glasshouses. They were later filled with flowering size vandas, ascocendas and phalaenopsis imported from Thailand, not to mention the orchids imported from all over Europe. Quite good fun!

About this time I met my wife to be, Agi, in Holland and I decided to move to Amsterdam and work in the emerging cymbidium cut-flower industry. While this was exciting, it was also very hard and somewhat tedious work. Agi and I decided our future lay in the great "down under" of Australia.

A job managing McBeans Australia in Melbourne was offered, so in 1973 we arrived and began a whole new life. The seven years working for Russell Martin at McBeans was invaluable in learning the art of growing cymbidiums in a new country. This laid the foundation for eventually establishing our own nursery.

In 1979 we built a mud brick house in Three Bridges, about an hour's drive from Melbourne, in the Upper Yarra Valley — now a great wine growing area. Also in 1979 the Halls family increased with the arrival of our first child.

I started the nursery by importing and growing cymbidiums for the pot plant market. The plants were from Keith Andrews in England, imported in flasks, and mainly *Cym. devonianum* hybrids as well as other miniature type cymbidiums. My demands on Keith for more and more



The Halls' mud brick home in Three Bridges.



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AOR 124

flasks became too much for him to supply. He introduced me, via mail, to Andy Easton in America. It was interesting to note that Andy was a New Zealander growing cymbidiums in America. Andy's nursery, Featherhill, was well known at the time. It just happened that he was looking for someone in Australia, through which to distribute his plants.

After talking to Andy on the phone, a visit to the nursery was arranged. I tried to explain to him that the nursery only consisted of one glasshouse and only half of it was full. Andy had no problems with this, as he preferred to start with a new fresh establishment. Andy flew out from America, had a look at the nursery, stayed one day then flew back the next day. Soon flasks from Andy started to arrive. He then moved back to New Zealand and formed Geyserland Orchids. With Andy Easton so close at hand many visits were made to the nursery in Rotorua, bringing back flasks and plants on every trip.

Encouraged by the activity in the New Zealand Branch of the Cymbidium Society of America (CSA) and with lots of support from Andy Easton and John Rowe, we established CSA judging in Australia. Snow Peterson became our first President and we began an exciting time, putting out bulletins and generally doing all those things necessary to keep an organisation on the road. The membership soon reached 200 and with several successful shows it seemed we were here to stay. Unfortunately the timing was probably wrong, without going into details let us just say the openness to progress and change, that is now evident in Victoria, was not happening then. We eventually became a small group judging only at overseas shows. Currently however, progress through the coming together of the Cymbidium Clubs in three states is evidence of exciting times ahead in orchid growing.

During the first seven years or so, Mt. Beenak Orchids grew only cymbidiums. The business expanded to include pot plant trade, hobbyists, retail outlet and mail order lists. Around 1987 I started my own hybridising, it was based along similar lines that Andy Easton was following but, incorporating my own parents often derived from Keith Andrew stock. While Andy usually made tetraploid crosses I often made triploid crosses, for use as pot plants. Crosses such as: *Cym.* Dr. Baker x *Cym.* Volcano, *Cym.* Dolly x *Cym.*. Val Wright, *Cym.* Dr. Baker x *Cym.* Hazel Tyers 'Santa Maria' and *Cym.* Vivien Hainsworth x *Cym.* Fascella 'Ruby' 4N to mention a few that have been pleasing. I also started buying the occasional flask, of what I considered interesting crosses, from



Cym. Leopard Lady 'Mary Smith' (Sleeping Beauty x Jean Slattery). This orchid stands the test of time for me, I always enjoy having it in flower and miss it when it is finished.



Cym. Tuffet 'Red Head' (Brook Street x Miss Muffet). Won Champion Cymbidium at a big show when only a four inch pot – that's economy orchid growing only now being achieved by masdevallias.



Cym. Langleyense 'Cascade' (*devonianum* x *lowianum*). A wonderful primary hybrid that can get a bit robust in growth, but never fails to flower profusely.



Cym. Cherry Blossom 'Profusion' (*erythrostylum* x *pumilum*). My favourite non *Cym. devonianum* hybrid, a true miniature and just a gem every year.



Cym. Hazel Tyers 'Santa Maria' 4N (Sussex Dawn x Cariga). Just a beautiful flower and probably one of the best parents available today.

other hybridisers.

In 1988 I realised that the nursery needed to incorporate other genera into the stock, in order to survive. Odontoglossums were the first other genera to be introduced. I was looking for odonts. with a wider temperature range, that would grow and flower easier, for the growing odontoglossum market. Other cool growing genera soon followed — Australian dendrobiums, cattleyas, zygopetalums, oncidiums and the latest arrivals the masdevallias.

The major source of income for the nursery now is the mail order listings, orchid fairs, special events and club functions. I spend a lot of time travelling and promoting orchid growing. Recently I travelled to Santa Barbara, in America, Tasmania and Bega in New South Wales.

At present I feel there is a resurgence of interest in cymbidiums. Hybridisers can now predict more accurately, in the light of what has been seen, what will be produced from certain crosses and hobbyists are again willing to grow seedlings. I would like to see the smaller growers getting into hybridising and more use of the Australian cymbidium species. The introduction of *Cym. sanderae* genes is already influential and will be even more so in the future".

Clives favourites are:

Species — *Cym. erythrostylum*
Hybrid — *Cym.* Gladys Whitesell 'The Charmer'
Stud Plant — *Cym.* Mini Dream 'Pure Gold'
Standard Showbench — *Cym.* Leopard Lady 'Mary Smith'
Intermediate Showbench — *Cym.* Alison Shaw 'Valentine'
Miniature Showbench — *Cym.* Cherry Blossom 'Profusion'

David Allen
18 Wootten Crescent
Langwarrin
Victoria 3910

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Cym. (Via Arcadian Rincon x Robert Rowe) 'Fantasia'

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Cymbidiums –

In 'The Land of The Long White Cloud'

by Kevin Butler

'The Land of The Long White Cloud' is a very appropriate name for New Zealand. Before I left for New Zealand at the beginning of August 1995 I had been told by several orchid growers that they were experiencing a terrible winter, with record rainfalls and cloudy days when not raining. As the plants had received little sun, they were flowering late and not up to their best.

Norm Porter was my first destination. He had recently built a new greenhouse using the latest technology. I enjoyed the guided tour with Norm and his son and obtained some new ideas. As always, there were a lot of good orchids flowering at Norm Porter's nursery. Some parents continually produce good seedlings. *Cym.* Coratea 'Rewa' is one of these good parents. Its own parents are *Cym.* Coraki and *Cym.* Tamatea, the cross registered in 1987. The following parents, *Cym.* Huckleberry Mountain, *Cym.* Jocko and *Cym.* James Wattie have produced good results when crossed with Cym. Coratea — very round, well filled in blooms are produced with a broad banded labellum. Colours range from green, yellow to brown. The broad banded labellum is normally bright red, except with *Cym.* James Wattie, then it is darker.

Cym. Musita 'Pinkie' has been another popular parent for Norm. It passes on to its progeny a very appealing, eye-catching labellum — deep, bright pink edging, with darker, distinct blotches. A very small seedling of *Cym.* Pink Champagne crossed with *Cym.* Musita showed lots of promise and perhaps a plant worthy of cloning in the future.

Cym. Red Beauty hybrids using the tetraploid forms have also been good. The variety 'Netty' has been used to produce huge pink blooms. One of the seedlings of *Cym.* Pink Sonata 'Pink Candy' with *Cym.* Red Beauty 'Netty' had this feature — a mid pink with the large 'Netty' type labellum.

Cym. (Red Beauty x Pink Champagne) 'The Bride' was a stunning new orchid that I had not seen before. A very clean white with good form and a pretty pink edged labellum.

A large plant from the primary hybrid cross of *Cym. madidum* x *Cym. mastersii* was in flower with its many small cream blooms. Norm showed me the old spikes, where a single bulb continues to flower year after year.

One of the darkest standard cymbidiums I have seen was on show. A dark brown/red colour, similar to *Cym.* Crackerjack 'Midnight Magic'. The parents were *Cym.* Doris Aurea 'F J Noonan' and *Cym.* Yowie Flame 'Geyserland'.

Norm obtained many good varieties out of the cross *Cym.* Mighty Margaret. Most impressive was the variety 'Apricot', with its very long racemes with flowers attractively arranged. *Cym.* Mighty Margaret is



Cym. (Red Beauty x Coraki) 'Mokoia Sunset'

a cross of *Cym.* Mighty Mouse 'Minnie' 2N with *Cym.* Coraki 'Margaret' 4N.

Cym. Earlisue 'Polar Bear' was also flowering. An attractive white intermediate — I can well understand why Norm is using the plant in his breeding program, it leaves the *Cym.* Summer Pearls for dead. *Cym.* Earlisue is *Cym.* (Sue x Trigo Royale).

For those who like the spotted blooms *Cym.* Pinata (Tethys x Khyber Pass) 'Freckles' is one to get when it becomes available. Colour is good, but it lacks the classical shape.

The next destination was South Pacific Orchids. Ross Taylor was having another successful year with his cut flowers. South Pacific Orchids do most of the flasking work for New Zealand growers — a quick stop to pick up some flasks.

Unfortunately Andy Easton was unavailable to show me around Geyserland Orchids, nevertheless, I still enjoyed the time I had at the nursery — like a child in a toy shop!

Cym. Atlantic Crossing 'The Globe' was just opening — an orchid with very filled in form.

Many good varieties from the cross *Cym.* Coraki with *Cym.* Red Beauty were flowering. Some that I had seen before were 'Fiery Cauldron' a red/brown colour, and 'Mokoia Sunset' a mustard colour. The new ones were 'Orange Crush' with an unusual labellum colour similar to the rest of the flower, and another, not named, that looked as if the flower had been scorched.



Cym. (Mighty Mouse x Cora Paddison)

Andy has made many successful crosses using *Cym.* Mighty Mouse 'Minnie'. This work was started back in the early 1980s. *Cym.* Kiri Te Kanawa has 'Minnie' as a parent. I have seen many hybrids with *Cym.* Mighty Mouse 'Minnie' as a diploid parent and they have been good. Now that Andy is using the tetraploid form, size, shape and colour of the next generation will be superb.

One of the best *Cym.* Mighty Mouse crosses has been with *Cym.* Cora Paddison — the variety 'Geyserland' would have been the orchid I most liked to take home. What a shame this cross has been done as a triploid.

Cym. So Bold crossed with *Cym.* Mighty Mouse is one of the first tetraploid *Cym.* Mighty Mouse crosses to have flowered. The variety 'North Shore' is a good shaped chocolate/brown. I am sure many more good ones will be seen in the future.

Cym. Richard Tauber 'Geyserland' was



Cym. Red Champagne 'The Bride' *Cym.* (Red Beauty x Pink Champagne)

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Cym. (Coratea x Huckleberry Mountain)

in flower. I have not seen a bad one from this cross. They look more like clones than seedlings. It is a cross of Cym. Radiant Harry and Cym. Vogelsang.

The cross *Cym.* Musita with *Cym.* Fred Stewart has been registered by Geyserland Orchids as *Cym.* Venetian Interlude. The variety 'Delight' was in flower — the attractive *Cym.* Musita 'Pinkie' labellum makes a lovely contrast to the white and pink blush sepals and petals. *Cym.* Musita Flame 'Geyserland' has the attractive *Cym.* Musita labellum with deep pink/purple sepals and petals — the other parent is *Cym.* Yowie Flame.

Cym. Musita crossed with *Cym.* Via Rincon, now registered as *Cym.* Rincon Music produced a variety called 'Mood Indigo', a most unusual colour consisting of a cream background with a broad pink/purple band down the centre of the sepals and petals. The *Cym.* Musita 'Pinkie' labellum was still dominant.

One other good crossing using *Cym.* Musita 'Pinkie' had *Cym.* Stanley Fouraker as the other parent, the variety 'Chuckle' is a pure white, full shaped flower, with a broad *Cym.* Musita 'Pinkie' labellum.

Everytime I go to New Zealand I try to get a piece of *Cym.* Musita 'Pinkie' but come home unsuccessful! I have been told it is a very poor grower.

The *Cym.* One Tree Hills were in flower. I have not seen this orchid flowered poorly. It is always impressive. *Cym.* One Tree Hill 'John's Quest' is a pure colour yellow. It will win the champion intermediate section in future shows. Because of the high quality of this variety Andy Easton has taken out a patent in Australia. The breeding of *Cym.* One Tree Hill is *Cym.* (Coraki x Dolly), which was registered in 1989.

A variety of *Cym.* (Coraki x May Hopcraft) was in flower with a concolour lip. Andy has told me that *Cym.* May Hopcraft is a carrier of the pure colour factor. This will start a whole new breeding program, for this information was not known until this year.

A very filled in white flower came out of the cross *Cym.* (Early Alice x Valley Flower). The flower was so full it could not open fully. Andy is using this plant in his breeding program. It also had several name tags in the pot of people requiring a division. I hope it is a quick grower!

The first hybrid using *Cym.* Music Box Dancer 'Ballerina' was open. The plant was only small and was carrying four white flowers with one of the prettiest labellums I have seen, a soft delicate pink edge, with the remainder of the labellum white. the other parent was *Cym.* Anna Szabo.

The last cymbidium I will mention stands out wherever it is placed, even from the other side of the nursery. It is *Cym.* Tracey Reddaway 'Geyserland', a brilliant yellow with a red barred labellum that does not fade, even after the flowers have been open several months.

There are more cymbidiums I could mention, but they can wait another year. ■

Kevin Butler
76 Evandale Road, Landsdale
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For further details contact Secretary, Helen Schultz,

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For further details contact Secretary, Kevin Brown,

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SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
Queensland				
16 March 17 March	8.30am-5.00pm 8.30am-3.00pm	Autumn	Eastern District	Wondall Heights State School Wondall Road, Wynnum
28-30 March	Shopping Centre Hours	Autumn	Gold Coast	The Pines Shopping Centre K.P. McGrath Drive Elanora
29 March 30 March 31 March	9.00am-4.00pm 9.00am-5.00pm 9.00am-4.30pm	Autumn	Queensland	Mt Coot-tha Botanic Gardens Auditorium Mt Coot-tha
29 March 30 March 31 March	9.00am-9.00pm 9.00am-6.00pm 9.00am-5.00pm	Autumn	Townsville	Townsville City Council Administration Building Walker Street, Townsville
30 March 31 March	9.00am-6.00pm 9.00am-3.00pm	Autumn	Hervey Bay	Hervey Bay Sailing Club Clubhouse Esplanade, Torquay
30 March 31 March	8.00am-5.00pm 9.00am-4.00pm	Autumn (25th Anniversary Show)	Redlands	Cultural Centre Cleveland
11-12 April 13 April	9.00am-5.00pm 9.00am-3.00pm	Autumn	Sunshine Coast O.S. Caloundra	Caloundra Civic Centre Caloundra
5-6 April 7 April	8.30am-4.30pm 8.30am-12 noon	Autumn (Orchid and Hibiscus Festival)	Bribie Island	Ningi Community Hall Bribie Island Road Ningi
11-13 April	Shopping Centre Hours	Autumn	Southport & Districts	Burleigh West Shopping Centre West Burleigh Road West Burleigh
13 April 14 April	8.00am-5.00pm 9.00am-3.00pm	Autumn (Charity Show)	Brisbane	Hamlyn-Harris Pavilion Mt Gravatt Showgrounds
18-19 April	8.00am-5.00pm	Autumn	Emerald Orchid & Foliage	Village Shopping Centre Hospital Road, Emerald
18-20 April	Shopping Centre Hours	Autumn	Mackay & District	Caneland Shoppingtown Mackay
18-21 April	Shopping Centre Hours	Autumn	West Morton Orchid Group	Ipswich City Square Ipswich
20 April 21 April	10.00am-5.00pm 10.00am-3.00pm	Autumn (Extravaganza)	Atherton Tableland	RSL Hall Main Street Atherton
27 April 28 April	8.30am-5.00pm 8.30am-4.00pm	Autumn	Ipswich	Bundamba State School Brisbane Road Bundamba, Ipswich
2-4 May	Shopping Centre Hours	Autumn	Redcliffe District	Peninsular Fair Shopping Centre Kippa Ring
8-11 May	Shopping Centre Hours	Autumn (Westfield Mothers Day Show)	Pine Rivers	Westfield Shoppingtown Strathpine
9-11 May	8.30am-5.30pm	Autumn	Tweed District	Tweed City Shopping Centre Tweed Heads South New South Wales
New South Wales				
6 April	8.00am-3.00pm	Autumn (Road Stall)	Camden Haven	Lord Street Laurieton
11-13 April 14 April	10.00am-7.00pm 10.0am-6.00pm	Autumn	New South Wales	Hall 2, Sydney Convention and Exhibition Centre Darling Harbour
18-20 April	Shopping Centre Hours to 3.00pm Saturday	Autumn	City of Lismore	Lismore Central Shopping Centre Carrington Street Lismore
20-21 April	9.00am-6.00pm	Autumn (Combined Native and Exotics)	A.N.O.S. Newcastle Group	Town Hall King Street Newcastle
27-28 April	9.00am-5.00pm 9.00am-4.00pm	Autumn	Blue Mountains and District	Penrith Garden Barn off Northern Road Orchard Hills
9-10 May 11 May	9.00am-6.00pm 9.00am-4.00pm	Autumn	Nambucca Valley	Entertainment Centre Ridge Street Nambucca Heads
New Zealand				
30 March	10.00am-4.00pm	Autumn	Whangarei	Onerahi Community Centre Whangarei

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The Official Publication of the Orchid Society of New South Wales and the Victorian Orchid Club.

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Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
14 McGill Street, Lewisham, NSW 2049
Australia.
Phone: (02) 560 6166. Fax: (02) 560 6677

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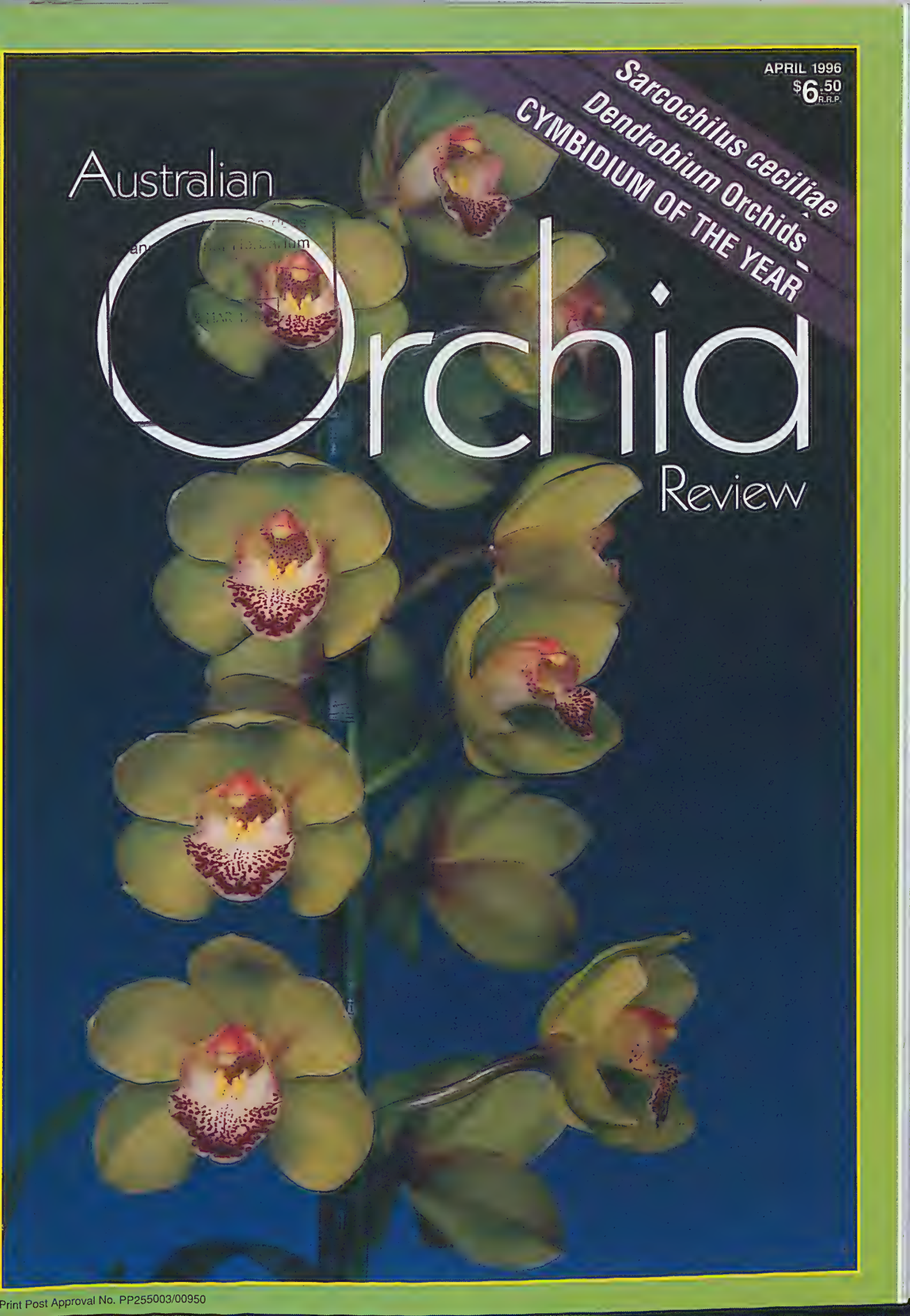
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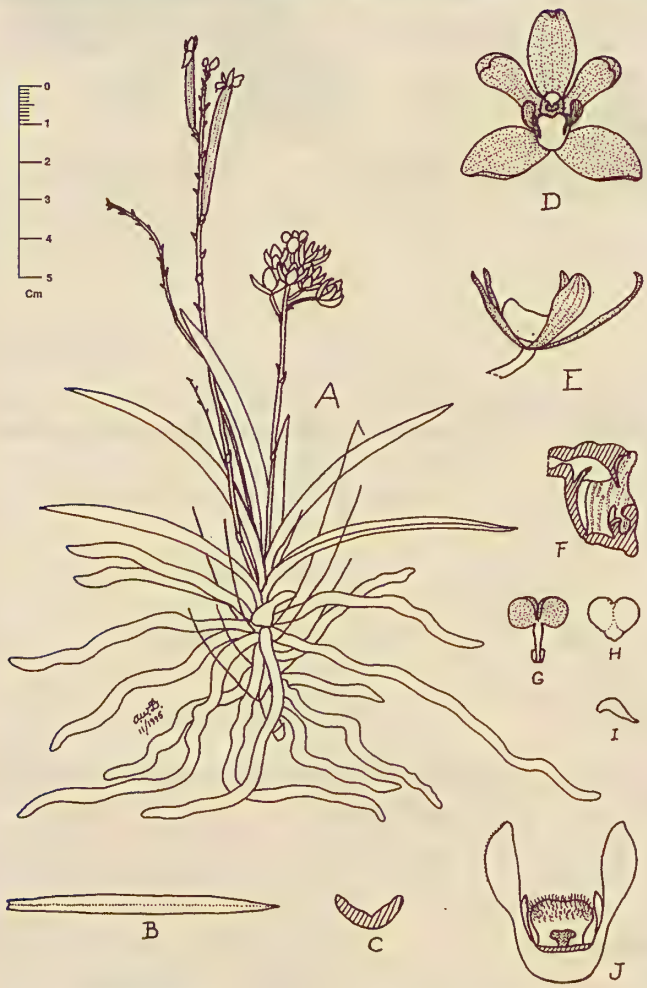
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A Review of the *Sarcochilus ceciliae* F. Muell. Complex

by A.W. Dockrill

Abstract: In this paper it is proposed firstly that the names *Sarcochilus ceciliae* F. Muell. subsp. *roseus* Clemesha, *S. roseus* (Clemesha) Clemesha and *S. ceciliae* F. Muell. var. *roseus* (Clemesha) Dockr. be relegated to synonyms of *S. ceciliae* F. Muell. var. *ceciliae*; secondly that the subtropical taxon, which for many years was generally considered the type form of *S. ceciliae*, be known under a new combination, *S. ceciliae* var. *eriochilus* (Fitg.).

Sarcochilus ceciliae* F. Muell. var. *ceciliae **S/585**



A – Portion of plant.....to indicated scale
B – Leaf from above.....to indicated scale
C – Cross section of leaf.....to scale x 3
D – Flower from above.....to scale x 4
E – Flower from the side.....to scale x 4
F – Median longitudinal section of column and labellum.....to scale x 6
G – Pollinarium.....to scale x 15
H – Anther from above.....to scale x 15
I – Anther from the side.....to scale x 15
J – Labellum from the rear.....to scale x 15

The holotype specimen of *Sarcochilus ceciliae* F. Muell subsp. *roseus* Clemesha (=*S. roseus* (Clemesha) Clemesha = *S. ceciliae* F. Muell. var. *roseus* (Clemesha) Dockr.) was obtained by Clemesha from a Cairns nurseryman, J.E. Jones, who, allegedly, collected it from near Tinaroo Falls Dam, Atherton Tableland ca. 1957, and was flowered by Clemesha in a Sydney suburb 11/12/1966. This gives the impression that in 1967 Clemesha's experience of the taxon was not great. This taxon occurs from near Mt Carbine to at least the Burdekin River (exact southern limit unsure) and grows on rocks or rock faces, mostly not at a low altitude in dryish situations which receive strong light although some plants may be in the shelter of shrubs etc.

The present author was recently (November 1995) privileged and delighted by the opportunity to inspect, on a property to the west of Atherton Tableland, a province (population) of rather many clones of "*roseus*" in full flower. These plants are mostly growing on a small cliff out of reach of wallabies in full sunlight or in the shade of a species of *Ficus* and either on bare rock faces or in cavities in which some litter had accumulated, or in the decaying roots of clumps of *Drynaria* ferns and, quite surprisingly, a few plants are growing as very healthy epiphytes on the *Ficus*. Most of the plants are in the form of up to a dozen or more leaf-bearing axes (stems) and only one plant consisting of a solitary stem was noticed. Drawing "A" depicts a stem from a good healthy specimen. The flowers varied enormously from bell-shaped with tepals overlapping to expanded almost flat and from deep rose pink to pale mauve and the mid-lobe of the labellum from free of the lateral lobes to the lateral margins of the mid-lobe joined throughout their length to the proxima half of the front margins of the lateral lobes. Some of these features are figured in drawing "B". The inner surface of the lateral lobes of the labellum were glabrous but with longitudinal red stripes and the front margins of the distal half ciliolate (this latter feature requiring the assistance of a hand lens to be seen). The two photographs on plate 149(p.991) of Vol. 2 of Australian Indigenous Orchids (1994) show some of the variations of the taxon



Sarcochilus ceciliae – the albino form. *Photo: Ray Robinson.*

but the place of origin of the two specimens shown is not known.

The holotype specimen of *Sarcochilus ceciliae* F. Muell. was collected by Bowman at an altitude of about 200m on Castle Mountain (Castle Hill) near the shore of Cleveland Bay, North Queensland. This locality is very rocky and the stunted trees quite sparse so that the area received quite strong light. Strangely enough, most people, during the past three decades, who have seen specimens of the Castle hill *Sarcochilus* simply refer to it as "*roseus*". Specimens seen on Castle hill (and in people's collections) by the present author leave little doubt that these and "*roseus*" are the same taxon. As the area is a reserve and specimens in collections difficult to authenticate, it has not been possible to get authentic material (particularly a range of material) from Castle hill to illustrate.

In N.E. New South Wales and S.E. Queensland (exact northern limit uncertain but sometimes given as Atherton Tableland but the present author is unaware of any populations in this area) occurs an allied taxon which grows on rocks in or near rain forest, but receiving a variable light intensity, in rather humid conditions. This taxon has, for many decades been mistakenly identified as the type form of *S. ceciliae*. Fitzgerald, in 1891, apparently was aware that this taxon differed from Mueller's species and described it as *Sarcochilus eriochilus* Fitzg. Differences between the two taxa are not as great as sometimes stressed and the joining or otherwise of the mid-lobe of the labellum to the lateral lobes is not a reliable guide. The leaves of the southern taxon are generally, but not always, longer, narrower and more spotted than those of the northern taxon, the inner surface of the lateral lobes of the labellum hairy rather than glabrous and striped, and the tepals generally of a thinner substance. The taxon also grows under more humid conditions than the northerner. To the present author these features do not warrant a separation of the taxa at the species level but sufficient at the variety level, but for those who consider them sufficiently different from each other to be called different species, the southern taxon should be known as *S. eriochilus* Fitzg. rather than *S. ceciliae* F. Muell.

To summarise and formalise it is proposed that the complex consist of:

Sarcochilus ceciliae F. Muell. var. *ceciliae*, Fragm, 5:42, (1865).

Type: "Castle Mountain on rocky hill 600 ft high, immediately on the shore of Cleveland Bay" Bowman s.n. (holo. MEL).

Syn: *Thrixspermum ceciliae* (F.Muell) Reichb.f., Beitr. Syst. Pflanzenk, 71(1871).

Syn: *Sarcochilus ceciliae* F.Muell subsp. *roseus* Clemesha, Orchadian 2:92(1962), — syn. nov.

Type: Cult. Concord West, 11/12/1966, S.C. Clemesha ex "near Tinaroo Falls Dam, Queensland" ca. 1957, J.E. Jones, s.n. (holo. NSW).

Syn: *Sarcochilus roseus* (Clemesha) Clemesha, Orchadian 3:35-6(1969), — syn. nov.

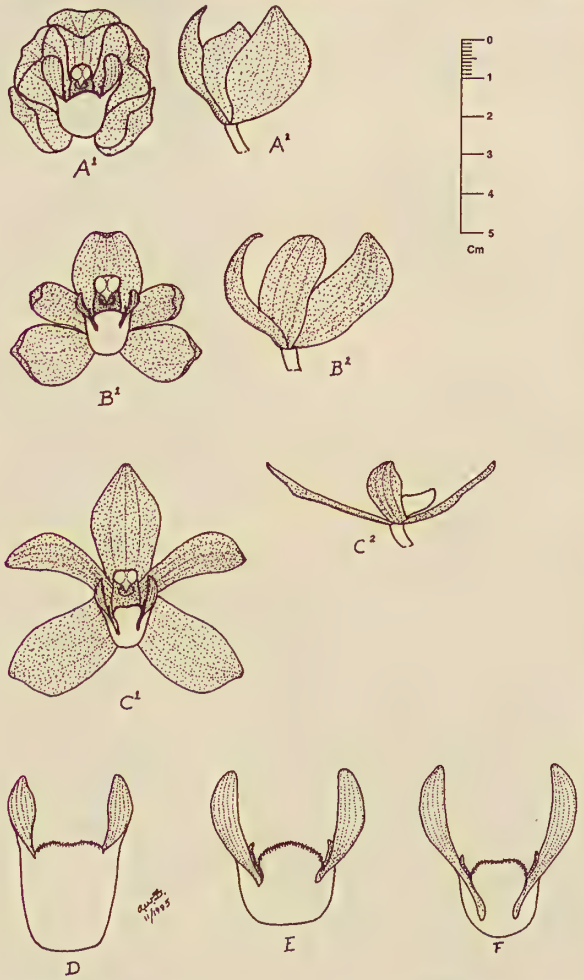
Syn: *Sarcochilus ceciliae* F.Muell. var. *roseus* (Clemesha) Dockr., Austral. Indigenous Orchids 2:988(1994) — syn. nov.

Sarcochilus ceciliae F.Muell var. *eriochilus* (Fitzg.) Dockr. — Comb. nov.

Bas: *Sarcochilus eriochilus* Fitzg., J. Bot. 29:153(1891).

Type: "Tweed River, New South Wales", R.D. Fitzgerald s.n. (holo. BM).

Sarcochilus ceciliae F. Muell. var. ceciliae S/586



A¹ – Flower from above to scale x 5
A² – Flower A¹ from the side to scale x 5
B¹ – Flower from above to scale x 5
B² – Flower B¹ from the side to scale x 5
C¹ – Flower from above to scale x 5
C² – Flower C¹ from the side to scale x 5
D –)
E –) Labella, from other flowers, from the front (above) to scale x 5
F –)

Syn: *Sarcochilus ceciliae* F.Muell, var. albus Hunt, Austral. Orchid Review 10:20(1949) — Comb. nov.

Type: "Tamborine Mountain, South Queensland", T.E. Hunt s.n. (holo. BRI).

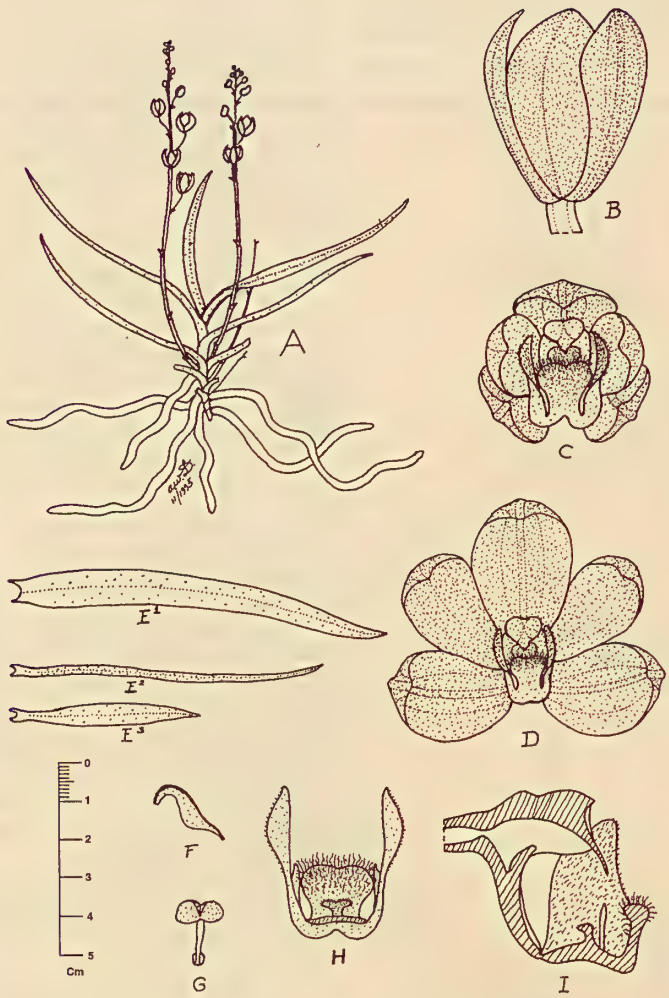
Syn: *Sarcochilus ceciliae* sensu Rupp, Orchids New South Wales 137("1943", 1944);

Nicholls, Orchids Australia 123, t.457(1969); Dockr. Austral Sarcanth. t.23(1967); D. Jones, Native Orchids Australia 563-4(1988); M. Clements, Austral. Orchid Research 1:132(1989) — non F. Muell. 1865.

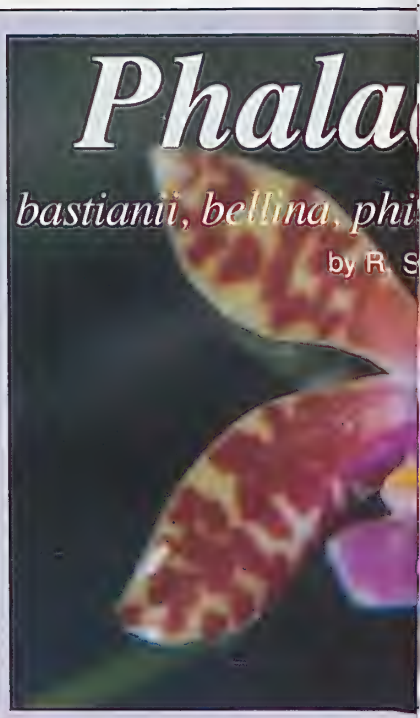
Syn: *Sarcochilus ceciliae* F.Muell. var. *ceciliae* sensu Dockr., Austral Indig. Orchids 1:723-3(1969) and Austral. Indig. Orchids 2:986-8(1994).

A.W. Dockrill
P.O. Box 127
Atherton
Qld. 4883

Sarcochilus ceciliae
F. Muell. var. eriochilus (Fitzg.) Dockr ***S/587***



A – Portion of plant.....to indicated scale
B –Flower from the side.....to scale x 6
C – Flower from above.....to scale x 6
D – Flower from above.....to scale x 6
E¹, E², E³ – Leaf variations.....to scale
F¹ – Anther from the side.....to scale x 12
G – Pollinarium.....to scale x 12
H – Labellum from the rear.....to scale x 12
I – Median longitudinal section of column and labellum.....to scale x 12



Phalaenopsis bastianii—

Over the past couple of years I have been finding plants, in collections around the countryside, all looking the same but carrying a plethora of names. The names are *P. deltonii*, *P. lueddemanniana* 'Deltonii', *P. mariae* 'Deltonii' and *P. mariae* 'Fasciata'. The species *P. deltonii* could not be found in the literature nor could any light be shone on it from its source in the Philippines, the flower looks very much like *P. mariae* but the plants looks more like *P. pallens*. When I was given a flower I sat down and compared it with the description of *P. mariae* in Sweet's review of the genus[1]. The callus formation on the lip is most important when resolving *Phalaenopsis* species. Reading the description I felt it differed in the callus formations but when I consulted the drawing I found the same "deltonii?" calluses illustrated there. I was now content in believing there were two forms of *P. mariae* one as described and one as drawn. The one with the broader pendulous leaves and the pendulous flowers the typical form. The other more erect plant with the more erect flower would be the confused form.

Nothing is ever that simple as I recently received a paper[2] published in Germany describing a new species *P. bastianii* and from what I can understand this is our confused 'deltonii'. Now I am confused again.

Phalaenopsis violacea:—

While on names, what is *Phalaenopsis bellina?* Eric Christenson and Mark Whitten[3] have split *P. violacea* up produc-



ing *P. bellina* for the Bornean type and retaining *P. violacea* for the Malayan type. The separation was based on variation in flower fragrances along with the well known difference in flower shape. They report both species have fragrances which are products of the mevalonic pathway but in addition *P. violacea* has a large amount of fragrances which are products of the shikimic acid pathway. This taxonomy is a deviation from Sweet's classification of *Phalaenopsis* based primarily on lip form and callus composition. If accepted it could open up a can of worms for the *Phalaenopsis* taxonomists.

Phalaenopsis philippinense/philippinensis:—

When the taxonomists were messing around at the introduction of this species the text the sketch and photo names varied[4], so this name may have to be resolved. The original description[5] of this species suggested it might be called *P. philippinensis*. Though this was only registered as a suggestion it should be binding and therefore the correct spelling. Most people are still calling them *P. leuchorrhoda* anyway. This is the name of a hybrid and in all the cases that I have seen in Australia, plants carrying this name are actually *P. philippinensis*. So if you have a plant named *P. leuchorrhoda* it is likely the tag predates the publication of this as a new species. Mind you the hybrid *P.* Leucorrhoda does exist. I only know of two persons that have done the cross and neither have been commercial so it would be unlikely that you have it. If it is white to pink with brilliant yellow side lobes you actually have the species *P. philippinensis*.

Phalaenopsis psilantha*[6]*:—

Much to my surprise it appears that the photo I published in the Australian Orchid Review is being acknowledged as representing the true *P. psilantha*[7]. Howdy doo, now I can call myself a taxonomist and be despised by all and sundry.

Phalaenopsis amabilis:-

One could hardly think there could be anything to straighten out here. Unfortunately due to national pride or whatever *P. aphrodite* from Taiwan has often been called *P. formosana or P. amabilis* 'Formosa'. There are a lot of these circulating in Australia now and being exhibited and winning prizes and awards as *P. amabilis*.

Congratulations to some of the South Queensland judges for insisting they be awarded as *P. aphrodite*. The botanists will argue about this one for a while yet but they will all agree on one point and that is that it is not *P. amabilis*. If you don't know what I am talking about see an expert who has a copy of Sweet's treatise[1]. The ones I am talking about have that well rounded flower with flowers parked like railway carriages. They look magnificent. They have a triangular lip rather than the crucifix shaped lip characteristic of *P. amabilis*. The callus of *P. aphrodite* is usually purplish in the juvenile state. *P. aphrodite* 'Ambigua' is an exception. The lip is triangular which gives the above discussed species away. The nursery trade is confused as well. I have seen many seedlings with purple underleaf which won't flower correct to the *P. amabilis* label. *P. rosenstromii* fits somewhere between the two species so really you need expert advice.



Synonyms *P. bellina* or *P. violacea.*

1. Sweet H.R. "The Genus *Phalaenopsis*" published by *The Orchid Digest.* 1980

2. Grub O. and Rolike L., *Die Orchidee* 42(2), 76-79 (1991)

3. Christenson E.A. and M.W. Whitten, Brittonia 47(1), pp. 57-60 (1995).

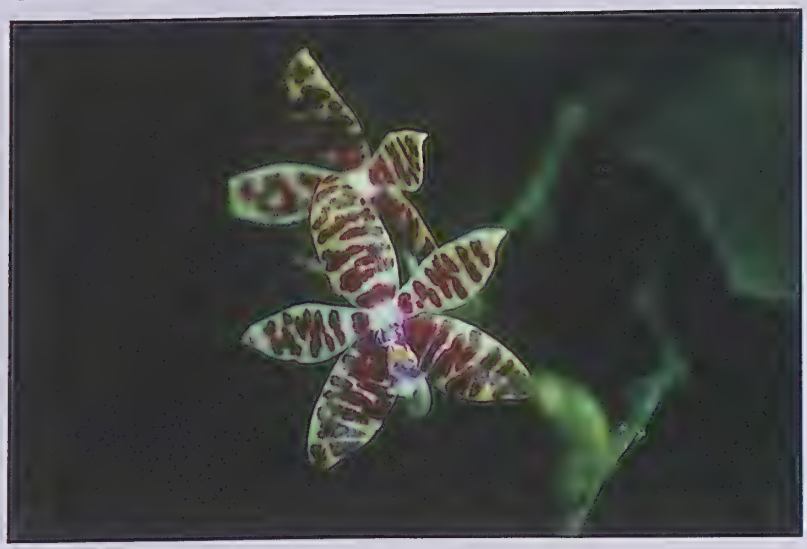
4. Thorp A.G., Fowie J.A. and Tang C.Z., *Orchid Digest*, April-June 87-94 (1987)

5. Golamco Jr. A. "A New Species in the Guise of *Phalaenopsis* x *leucorrhoda*". *Philippine Orchid Review* April-June 17-25 (1984)

6. Smythe R.S., *Aust. Orchid Rev.* October 41-43 (1994)

7. Christenson E.A., private communication.

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James Cook University
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P. mariae

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A Boy and his Orchids

by C. Kozlowski

He's tall and well built. "A strapping young lad" as some would say, with deep piercing blue eyes and short dark hair with a fringe that falls gently across his forehead at times. His often engaging smile broadens suddenly as he talks about his first loves of the orchid world — the Draculas, Masdevallias and Dryadellas. But have the conversation revolve exclusively around Draculas and Masdevallias and his eyes widen, his enthusiasm clearly evident. His name is Brendan Larkin and he shows in the Junior section of the Mornington Peninsula Orchid Society in Victoria.

An afternoon with Brendan and his little treasures is a journey into another often overlooked and nearly forgotten world of orchids. For any visitor it really is a case of BYO magnifying glass as one struggle to look into the heart of these miniature exotics. Nevertheless, the straining and struggling proves worthwhile as I see the exquisite detail of *Masdevallia yungasensis* and the now awarded *Dracula* Vlad-Tepes 'Jack' for which Brendan recently received a HCC/OSCOV.

In the glasshouse his Draculas, Masdevallias and one or two Dryadellas sit comfortably in polystyrene boxes on top of wire mesh benches in a gable greenhouse with an easterly aspect and 70% shade. A few are suspended in pots underneath the benches and one or two such as his awarded *Dracula* are suspended under the bench over a strategically placed bucket of water. Eventually he hopes to have the entire collection sitting over pans of water. He happily goes into detail on how this will be achieved and the benefits of this strategy to his plants. A fan placed to one side of the door gently keeps the air circulating. A firm believer in keeping things as natural as possible, the entire collection is potted in *Sphagnum*.

Proudly standing before you he points to his side of the glasshouse and removes from the bench anything he may suspect will interest you for your perusal. It may be a *Masdevallia* Harlequin or something more rare such as a *Masdevallia yungasensis*. Names such as *Masdevallia davisii* and *Dryadella zebrine* simply roll of the top of his tongue.

A conversation with Brendan can take you to a higher plane of understanding from that of your own. A young enthusiast, his mind works at a million miles a minute. With a combination of excitement and playfulness he fires off some rather exotic crossing possibilities at you. Your mind struggles not only to keep up with him, but to imagine, to envisage what he does in his mind's eye.

As he talks, he weaves a spell that compels one to listen intently. With the mastery of a commercial grower he talks confidently about his hopes and the future of his plants. Brendan clearly has the future mapped out and he regularly peruses the catalogues and commercial sales tables for those hard to get plants and clones. Any rumours about an upcoming sale or an importation from some of the leading *Masdevallia* nurseries from America are carefully followed. Although some of the plants in his collection are very expensive, one must understand that he does not buy plants at the drop of a hat. He carefully checks into the plant's parentage, and into the history of how the plant came to be for sale. His small collection is being built slowly but surely from a solid foundation.

Make no mistake, Brendan also grows other genera such as Cymbidiums and Australian Native Dendrobiums. However, his heart unashamedly belongs "to species, those orchids that have been around for millions of years", as he puts it. This young gentleman has come so far in a short period of time for all of his fourteen years.

While watching Brendan set up at our Winter Show earlier last year, his mother firmly yet lovingly stated that if there was one thing she had to be grateful for it would be that people had taken Brendan under their wing, had guided him, had provided him so readily with help and advice and exposed him to something that would stay with him for the rest of his life, because so many his age have taken a different path in life and have not been so fortunate.

Congratulations Brendan, we at Mornington Peninsula Orchid Society are proud of you!!

C. Kozlowski
Publicity Officer, M.P.O.S.

Not just but a W

by Pe



Bob Nevins

Bob Nevins was the proprietor of "Nevins Orchid Nursery" at Cairns. He became one of the most knowledgeable orchid men in Queensland and certainly one of the most respected.

Here Bob speaks of the early days of orchid growing in North Queensland and the establishment of Nevins Nursery.

I guess my interest in orchids started in 1936. Times were bad, but my Dad started a job with the Blue Mountain Mining Co. on a mining camp 35 miles out of town. We had been living on the Palmer River and were now living in Coen. We went up on a ship called the "Wandana" to Port Stewart, north of Cooktown. On arrival we were transferred to a small fishing boat, as the tide was out and the "Wandana" could not get over the sand bar. On the full tide we were taken to a small landing where they unloaded our worldly goods, including some chooks in a crate. We were put into one of the huts; the others were occupied by the miners. My Mum was the cook. The "Wandana" came up once a month and if we were lucky that was the only time we got away from the camp. We went in a truck to pick up our supplies. The combination of the bad road and the truck's solid rubber tyres made it a marathon trip. It was particularly difficult crossing some of the sandy rivers. In the wet season Dad would go in with the horses as that was part of his job. I had a horse and spent most days out riding in the bush. I was 10 and had two sisters, Dawn 8, and Alice, who was 5. My mother was the only white woman for 35 miles, which in those days in that country was a long way and we were the only white children. As there was no school I had plenty of time to explore the countryside. I soon became interested in the beautiful purple flowers on the Cooktown orchids. Some were in the trees but most were up in the mountain gullies on the rocks. In the flowering season I would pick bunches for mum for the tables; the variety was somewhere between the *Den. bigibbum* var. *superbum* that grew up around Cooktown. *Den. bigibbum* var. *bigibbum*. There were also a lot of *Den. johannis* growing on the stunted Melaleucas.

In 1938 we decided to go back to Cairns, so Dad brought an old Super six Hudson car to make the trip in. I got a kerosene tin case and filled it with orchids, which Dad tied to the running board of the car. I was 12 by this time and remember what a terrible trip it was. We followed the telegraph stations most of the way. My mother walked a lot of the way trying to find the road in the long spear grass and it took over a week to get to Cairns.

I went to school at Parramatta State, Cairns. My teacher was Bill Kerslake; he grew orchids and we became friends because of this. We lived in O'Leary Street in the Bungalow area. It was all bush then and many orchids grew in the trees, so I soon added to my collection. The bush has all been cut down now and the area is residential.

George Nix, another teacher at the school, and a pupil, Jim Bourner, (who later became Principal of the Trinity Bay High School) were the only ones I can remember who were interested in orchids.

I left school in 1940 aged 14 to work as an apprentice plumber for two years. My boss Bill Pierce joined the Fortress engineers so I got a job as an apprentice carpenter with Fred La Cava. After a couple of years, Fred joined the Civil Construction Corp, but it was hard to get building materials because of the Second World War.

I had an orchid house in the backyard, and kept up my collection. I had a trip to the Daintree and got a few *Phalaenopsis amabilis* var. *rosenstromii*. I swapped one with an uncle, Amos Baker in Innisfail, for a plant of *Cattleya gigas (warscewiczii)*. This was my first exotic orchid and the genus was to become one of my favourites.

In 1946, I married Oriel Doyle. We bought land in Comport Street for 130 pounds and 2 army huts which we lived in, for 10 pounds each. I had an iron frame canopy off the back of an army truck. I can't remember if it fell off or I bought it. It was my orchid house frame with a few palm leaves on the top to form the roof.

I built a large Queenslander house from logs I cut out of big paper bark Melaleucas that grew in the swamps in that area and had them milled at Edge Hill sawmill for 12/- per 100 super feet. It cost me 2/6 per 100 super foot to have them delivered by Mr Beh. On completion I sold the house and built another one in Hannam Street, in the meantime working on the wharves where I earned the money to build up the orchid collection and build the houses.

In 1961 I bought a hand-operated brick making machine and made concrete face bricks to build a house and orchid house on an allotment I had just purchased at 413 Mulgrave Road, from my Aunt, Mrs Hinds, who lived next door.

I had three daughters by then, Robyn, Joy and Joan. All are married now. Robyn's married name is Stone and she is a partner in a Real Estate business and a grandmother. Joy's name now is Gibbs and Joan married Eddie English who is also a keen orchid grower and is a Q.O.S. and A.O.C. orchid judge.

When the children were small a man who came to the house to sell insurance asked one of the girls where their father was, and she said he's down in the orchid house with his Nellie Morley. It made my wife smile because she knew that was the name of a *Vanda* I had just bought. The man, not knowing anything about orchids, didn't know what to think!

In 1965 I built a large glass house for the orchids and started Nevin's Nursery. Prior to this I was doing flask culture and worked for John Jones at Limberlost Nursery. John and Sybil Jones were great



friends and it was at Limberlost I learned the business side of orchids. I have many people to thank for my success in the orchid world but I believe John Jones heads the list. John and I flew to Sydney for the Sixth World Orchid Conference and set up a display of orchids that we took with us. We shared a commercial stall with Bob Peters, an American who owned the famous Peters fertilisers. We had 15 wonderful years at our nursery — it was what I had always wanted, working with orchids and making a living from them. Being able to do my own flaskings was a big help and later to have Cliff and Betty James at Mudgeeraba to do the replating for me. They looked after me when I went down to pick up the flasks in my panel van. Driving from Cairns to the Gold Coast twice a year was a long trip, but well worth it because of the great work they did. During the time I operated the nursery they replated hundreds of flasks for me, some of which I sold to other nurseries.

Sylvia Reilly planted quite a lot of the flasks out for me. Sylvia and Ted have been friends for a long time. They are both life members of the N.Q.O.S. Cairns, along with Lou Heyer and myself. Don Kerr, another good friend of mine, spent a lot of time with me, including a trip to Hawaii, where we were chasing those award winning Cattleyas.

In 1975 we were getting very busy at the nursery, and a young lad called John Welch — who lived in Townsville, came to the nursery with his married sister Loris who lived in Cairns. I employed John and it turned out to be one of the best things that I ever did. His mother sold her home in Townsville and they moved to Cairns.

With the help of Rev. Ron Collins we got John into a scheme with the Department of Labor and Immigration to provide training for him to become an orchid nurseryman. I believe he was the first person to do this course in orchids. He loved the nursery work and the orchids, and soon became a part of our family, just like a son. We worked together for five years and had a trip to Hawaii together to buy plants for the nursery.

In 1978 I registered a cross of mine in memory of a friend Jack Duran who was a foundation member of the Tully Orchid Society. (*Lc.* Norman Morell x *Lc.* California First) = *Lc.* Memoria Jack Duran, and many other x's.

In 1980 Oriel had a health problem and I sold the nursery to Roy Down. John stayed on with Roy. We bought five beautiful acres in Kuranda, built a house and called it "Whippoorwill" from a song we used to sing called "My Blue Heaven". We selected orchids from the nursery and moved to Kuranda. Two years later Oriel died, but we had enjoyed 36 wonderful years together. Since then I have lived here in Kuranda. It's a lovely climate and I spend many hours with the orchids. There is always something interesting going on in the collection. They have been my love, my living and my salvation. What with producing such beautiful blooms, winning awards, winning shows and bringing other orchid fanciers and friends to my house to see them, they have given my life so much joy. They say orchid growing is a disease and once you catch it you can't shake it off. I'm glad I caught the disease.

A cross I did between *Phalaenopsis* Doreen and Doris produced some lovely flowers and I was going to register the



Dendrobium Susan Kerry — *Photo: Ray Nicholls*



Lc. Memoria Jack Duran *(Lc.* Norman Morell x *Lc.* California First)

cross *Phal.* Oriel, but Kodama in Hawaii had done the same cross, had the papers in a couple of months before me and called it Spring Showers. I flowered two of them in 1966, sent the flowers to Lou Sasso in Sydney and he put them up for an award. The plant I named 'Oriel' received an AM and the other clone 'Georgina', after my mother, received a HCC from the Orchid Society of NSW. This was one of the greatest thrills I've had, to get an award with plants raised from my own seedlings.

Fred Kleimeyer (now editor of the QOS bulletin), a friend of mine, arranged for Dr. Yoneo Sagawa of the University of Hawaii at Moana to come to Australia to conduct a course on Tissue Culture. He was the director of the Lyon Arboretum and one of the world's leading authorities on meristem culture. It was decided to conduct the course at the University of New England, Armidale. Fred asked me if Dr Sagawa could come up to Cairns first and stay a couple of days with me and I agreed. After our stay in Cairns, Fred picked us up at Brisbane airport and we three drove to Armidale to do the course. There are so many things to learn about orchids one never has a dull moment.

There are many other dear friends whom I would like to mention but it would take a book to do this; they all know how I feel about them. Some I have named orchids after have passed away. They are among my precious memories and I thank them all for their help, their company and their friendship.

A friend Bill Kerns who had a large collection, supplied Kirkwood Orchids with cut flowers (orchids), did a cross *Bc.* East Dean x *Bc.* Deesse and asked me to plant the seed in the late '60s. I grew the plants and when they flowered I registered the cross *Bc.* Memoria Bill Kerns (1972), as by this time Bill had passed away.

I did the valuation of orchids of Kirkwood Orchids, Sheridan Street, Cairns after the death of Mrs Eunice Kirkwood and after the death of Les Elliott I valued his orchids in 1988, at Elliotts Wholesale Nursery at Spendley Road, South Johnstone.

In 1983 I taught an orchid class at the Cairns T.A.F.E. I enjoyed this but I had to travel from Kuranda to Cairns each time, and as I had five acres to look after it was a bit too much for me so I declined an offer to teach a further course.

Orchids are complemented by good foliage plants and I enjoy growing them too. I joined the Cairns & District Horticultural Society and was President in 1971 and 1972. It is now called the FNQ Horticultural & Garden Club Inc. At the northern shows I judge the pot culture and have a certificate which entitles me to do so. I am also an orchid judge with the Q.O.S. and the A.O.C., a life member of the North Queensland Orchid Society in Cairns, an honorary member of the Innisfail Orchid Society, have been presented with an Award of Service from the Q.O.S., been guest speaker at the Honolulu Orchid Society and Pacific Orchid Society in Honolulu, the Manly O.S. in Australia, and most of the orchid societies north of Brisbane as far as Port Douglas.

The N.Q.O.S. Cairns had a beautiful shield made and named it the R.A. Nevins shield. It is a perpetual trophy and is presented to the person who gains the most points in the popular vote for the year.

Last year, 1995, my orchids won Grand Champion at the Cairns Show and Grand Champion at the Cairns Plant Expo.

I was born on the 6th August of 1926, and this year being 1996 makes me almost 70 years old. I believe that working with the orchids and having an interest in them has kept me healthy and fit. I am still putting in a few seed pods on my plants and hope to see them flower.

Three years ago I met a lady named Pam Ramsay at an orchid meeting. We both love plants and enjoy each other's company and are now married. The property, our plants and orchids are our interests. We go to the orchid shows and meetings, to horticultural shows and meetings and judge shows from Ingham to Port Douglas.

My main interests now are Cattleyas *Oncidium* Alliance, soft cane Dendrobiums, Paphiopedilums, foliage and fruit trees. You can see that I have and have had a full life and I owe a lot of thanks to those wonderful and beautiful plants called orchids.

Bob Nevins
Kuranda Qld 4872



Lc. Memoria Georgina Nevins *(Lc.* Kindee x *Lc.* Gene May)

Dendrobium signatum

This attractive species is common in collections in North Queensland where it usually goes under the name *Dendrobium hilderbrandii*. This was the accepted name until some ten years ago when the late Professor Ted Schelpe studied specimens with Dr Gunnar Seidenfaden and came to the conclusion that it was the same as *D. signatum* and this was the name used in the book *Dendrobiums — an introduction to the species in cultivation* by Sybella Schelpe and Joyce Stewart. Seidenfaden also took up this name in his works on orchids of Thailand and of Indochina and it is now generally accepted that these two names are synonymous. Most plants in collections in North Queensland have the varietal name "*occulatum*" on their labels. This name comes from the two dark reddish-purple patches on either side of the lip which are present on many cultivated plants. However I can find no formal justification for the name which may have arisen from the similar markings in *D. fimbriatum* var *occulatum*.

To complicate this matter further there is a school of thought that *D. signatum* should be considered synonymous with *D. tortile*, although the balance of current opinion seems to be that they are separate. This history of changes in names illustrates the problems of taxonomists attempting to squeeze the plants into a nice, neat series of boxes labelled "species" or "varieties". No one told the plants that this was required of them and quite often they just do not fit humans ideas. In other words all species are not equivalent. Some pairs of species are extremely closely related, while others are clearly separated. *D. signatum* and *D. tortile* are obviously a closely related pair and it remains a matter of judgement or opinion as to whether they should be regarded as separate.

D. signatum is a member of the Section *Dendrobium* which includes many popular species such as *D. nobile, D. aphyllum, D. anosmum* and *D. parishii*. It occurs in Burma, Thailand, Vietnam and Laos usually at low to moderate elevations in the mountains.

So much for the taxonomy. This is a most attractive species which does very well in tropical Queensland in an open shade house. In common with most species in this section, the leaves are deciduous after a year or two. The flowers which last about three weeks are borne in August or September on the leafless canes and are about four to six centimetres across. They are very profuse on a large plant. The plants are easy to grow, doing well in a standard dendrobium mix of bark in a small pot or basket under shade cloth or on a tree in partial shade. The canes grow to about 50 centimetres long, becoming pendulous as they lengthen. Like most of the soft cane species, it needs a dry resting period through winter to flower well and appreciates frequent applications of fertiliser during the growing season.

Captain Bartle Grant in his book *The Orchids of Burma* (1895) sheds some light on the history of *D. hilderbrandii:* " A handsome species collected in the Shan States by H.H. Hilderbrand Esq. in April 1893 and sent to Messrs Hugh Low & Co., of Clapton, together with living plants, which flowered in their establishment a year later. It has the general habit of a strong *D. signatum* to which it is perhaps most closely allied. The sepals and petals are somewhat twisted as in *D. tortile*, though their shape and colour are quite different. The sepals and petals are very light whitish yellow, and the lip deep orange buff with a broad light yellow margin. Mr Hilderbrand collected three different forms, one with sepals and petals pale green and lip sulphur yellow, one with sepals and petals creamy pink and the lip yellow and a third like the last, with the addition of two dark chocolate blotches in the throat. He observes that it grows in magnificent huge masses, and on one of the plants he counted upwards of 1500 blooms. The old pseudobulbs show it to be as floriferous as *D. nobile* . . . Hab, Shan States, alt. 1500 ft."



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Victorian Orchids of the Year Awards 1995

by Bill Johnson



Masdv. Harlequin "Wantirna" HCC/OSCOV

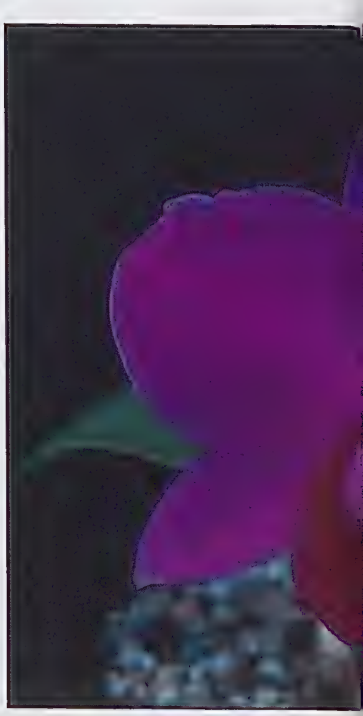
The results of the Orchid Societies Council of Victoria (OSCOV) "Orchid of the Year" awards for 1995 were chosen from the best orchids exhibited and awarded throughout Victoria during that year either at orchid society meetings or at orchid shows.

All awarded plants for each year are considered and if thought worthy are selected as the Orchid of the Year for their respective genus or genera class and from these the Orchid of the Year is selected.

As the accompanying photographs show, the quality of the awarded plant for 1995 was excellent.

The winners of the various categories from which the Orchid of the Year was selected are as follows:—

Cym. Kelley's Winter 'Patricia' HCC/OSCOV was selected as **Cymbidium of the Year** (owner Vic Haskard, South Australia). This is a fine example of modern yellow standard Cymbidium breeding. Mericlones of it were on offer in Melbourne after the



Lc. Mini Purple "Lea" AM/OSCOV

OSCOV August '95 show so no doubt it is available if one cares to search around. It is not very many years ago that a *Cymbidium* such as this would have received an AM — that's progress, I guess! (See photograph in Cymbidiums Australia Section).

The **Paphiopedilum of the Year** was *P.* Luther's Slaughter 'Castle Bend' HCC/AD OSCOV. (Owner Castle Creek Orchids). For some years there has been great activity in "vinicolour" *Paph.* breeding and while some of the earlier results were worthwhile what we are now seeing is excellent shape, colour and form and it can only get better.

Masdevallias are a genus which is rapidly growing in popularity and examples are now being awarded on a regular basis. The **Masdevallia of the Year** for 1995 was Dieter Weise's *Masdv.* Harlequin 'Wantirna' HCC/OSCOV.

A very welcome award was the HCC/ASCOV awarded to *Dendrobium* x *delicatum* 'Cathie' owned by A. and J. Leamon. Some might say that should be *specio-kingianum* 'Cathie'! Anyway, that made it eligible for and it received the **Australian Native of the Year** award. It is regrettable that it is rather rare for our very own natives to be awarded and yet there are many fine examples such as this being shown every year. Perhaps this award is an indication of things to come?

The award of **Award of Distinction** (AD) is usually given to an orchid which





*Paph.*Lutner's Slaughter 'Castle Bend' HCC/AD OSCOV



Den. x delicatum 'Cathie' HCC/ASCOV



Paph. sukhakulii 'Castle Creek' AM/OSCOV

has distinct colour characteristics and the vinicolour Paphs. are a good example of that so it is quite understandable that the **1995 Award of Distinction** went to *P.* Luther's Slaughter 'Castle Bend' HCC/AD OSCOV. Owners Castle Creek Orchids.

Any other Hybrid of the Year went to *Laeliocattleya* Mini Purple 'Lea' AM/OSCOV. This award was not surprising since the flower shape and colour, and the magnificent labellum combine to make an excellent orchid.

Species Orchid of the Year was *Paph. sukhakulii* 'Castle Creek' AM/OSCOV (also owned by Castle Creek Orchids).

The **Cultured Orchid of the Year Award** (which is awarded to the grower and not the plant) was *Cymbidium* Ken Gorey 'Moe Star' HCC/CC/OSCOV. Owners K. and D. Moore.

That is the complete list of winners in the various genera sections and it is from those that the Orchid of the Year was selected.

Since it received an Award of Merit it is not surprising that the **Victorian Orchid of the Year** for 1995 award went to the outstanding clone of *Laeliocattleya* Mini Purple 'Lea' AM/OSCOV.

Having seen most of the awarded plants "in the flesh" I can say that their awards were justified and if the standard continues to improve on this then the future competition will be very stiff indeed.

Bill Johnson
1265 Western Port Hwy. Vic. 3910.



Cym. Ken Gorey 'Moe Star' HCC/CC/OSCOV

SA Orchidaceous Society

The South Australian Orchidaceous Society again held their September Spring Show inside the Atrium Mall of the Burnside Village Shopping Centre, and a Cymbidium was awarded Grand Champion of the Show.

Cymbidium Valley Zenith 'Top Spot', owned by Colin and Nan Grigg, with two spikes each with 14 well spaced large, unmarked green blooms, and a bright red spot on each white lip, was a distinctive winner from a large range of varied and colourful orchids displayed.



Cym. Valley Zenith 'Top Spot'

The displays were located in five areas each enclosed with wire mesh panels and comprising composite, group and individual displays.

Reserve Champion, went to a glistening white standard *Phalaenopsis* Schneewittchen 'Houghton', owned by Johnstons Orchids. They also won Most Outstanding Seedling with another large white *Phalaenopsis* (Giant Frost x Blanca Grande).

Best Individual Display was won by Johnstons Orchids and the Best Group Display by Colin and Nan Grigg and Len and Lena Brombal.

Paphiopedilum Gael 'Camira', a maudiae type green and white *Paph.* won First Division Champion for Colin and Jean Tilbrook, whilst Kevin and Jean Whibley gained Second Division Champion with *Dendrobium* x *delicatum.*

The enormous effort from the Society's members resulted in a spectacular show which was enhanced by the ideal venue and setting with natural light allowing the multitude of flowers of a large range of orchid genera to be viewed in their true colours, a factor greatly appreciated by the judges and public alike.

The prize winners, place getters and all those willing workers amongst our members who put in so much effort to ensure a successful and enjoyable show certainly did themselves proud.

Alan Davies

Wangaratta and District Orchid Society Inc.

The Wangaratta and District Orchid Society 1995 Show was held on September 23rd and 24th 1995 at the Secondary College Hall.

Once again there was an excellent display and the hall was a blaze of colour with the Native sections being well up on previous years. Table top displays were an added feature this year and were well presented.

Grand champion orchid of the Show was *Dendrobium linguiforme* 'Jean' owned by Max and Jean Fruend which was also awarded a cultural certificate and best Australian Native.

Reserve champion was *Paph. hirsutissimum* grown by Fred and Trudi Behrens from Albury Wodonga Club.

Best cymbidium was *Cym.* Valley Zenith 'Green Orb' owned by Max and Jean Fruend.

Best orchid by a Novice was *Cym.* Elsie Mitchell 'Bold One' owned by Norma Hunter.

One of the pleasing aspects of the Show was the quality of the orchids which has steadily improved over the past 8 years since the Club's inception. The large number of orchids benched came from a very wide radius some as far as 150 km away. All orchids were of a very good standard.

The Show was judged by three judges from the VOC and a number of trainee judges were present.

Jim Tobias
Vice President

● *Den. linguiforme* 'Jean' which won Grand Champion of the show has since won the Bill Murdock Trophy. Max and Jean Fruend being the very proud owners of Willandra Orchids, Oxley.

Max is President of the Orchid Club and at our February meeting Max and Jean were presented with a framed photograph of *Den. linguiforme* by the members.

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Dendrobium kingianum Bidw.

crazy collecting, culturing and conserving

by Dr. Peter B. Adams

Unless you do these crazy things, you don't start to understand. Sending a man to the moon may have been perceived as the most stupid thing imaginable, but think of all the benefits . . ." Robert Opie, collector of packaging (Elsner and Cardinal 1994).

Maryborough is a fitting place to launch a book and to celebrate the variations of a popular Australian species. John Bidwill sent specimens of *D. kingianum* to England for the original description published in 1844. He lived on the south bank of the Mary River and is buried there, at a site which should be recognised and restored. He imported fruiting and other tropical plants, was Harbourmaster, Commissioner of Crown Lands, and Chairman of the Bench of Magistrates. Surely he is a significant and under-recognised figure in the development of Wide Bay, the unintentional originator of an era of crazy collecting and culture.

A definition: **collecting** — the assembly of information, ideas, plants or other specimens from legitimate sources. It is *not* taking from the natural habitat, legally or otherwise.

The Cult of Collecting

Why do we collect? What do collections represent? Many personality types collect a multiplicity of objects, antiquities, animals and plants. In general, collectors are achievers with a rather meticulous or particular approach to their hobby. It can become an obsession, distraction, status symbol, source of power, substitute for other sources of satisfaction, escape from time and place, and a barrier to problems and stress. Collectors include hoarders, exchangers, traders, supertraders, one way accumulators, pot hunters, and ordinary well-balanced orchid growers.

Sigmund Freud was an inveterate collector, not only of cases, dreams, early memories, slips and jokes, but also of Egyptian and Roman antiquities, dogs, rare plants, and flowers. He saw the collector as having a passionate excess, a love of "things", restoring "his/her ties to the world", and noted the special charm of objects out of reach. He constantly added to his collections, accumulated over 3,000 objects, and noted that "A collection to which there are no new additions is really dead".

The following article is the second in a series of lecture notes that were presented by eminent orchid people, at the Australian Native Orchid Society Wide Bay Group Cultural weekend, held in Maryborough, Queensland during May, 1995. The AOR has obtained exclusive rights to some of these notes.

Collection of plants becomes an extension of the collector himself, sometimes leading to over-identification and feelings of personal rejection, anger and blame when plants fail or are unsuccessful in competition. We have all seen a part of the craziness that surrounds orchid displays and judging, where plants take on human dimensions and behaviours are best understood on the psychiatrist's couch.

Dendrobium kingianum Monograph

The *Dendrobium kingianum* book is a combination of individual collections of information, ideas, plants and photographs, which preserve the elements of the many collections represented there. They will survive long after plant collections have been broken up, disseminated or neglected. The fate of almost all orchid collections is to disintegrate and die. Conservation by collection of plants is the greatest of orchid myths. There are two main types of conservation, the most important being conservation of large areas of undisturbed and well managed natural habitat. The second is preservation of information in the form of printed material. This is the rationale that gave rise to the 1995 publication "*Dendrobium kingianum* — a unique Australian orchid".

Collected plants of *Dendrobium kingianum* are so numerous and variable that a representative information base has been difficult to compile. In the past fifteen years, with the assistance of a research collection, botanists, and specialist collectors, we have compiled information about origin, characteristics, flowering, culture and conservation of most of the important plants propagated from original bush collection, and for plants used in breeding programmes and listed in catalogues. Variation over the entire range has been studied, enabling a taxonomic revision and a systematic approach to recording of variation. Original descriptions and historical documents have been located and critically reviewed, and cultural information provided that can be used in all areas of the world where *D. kingianum* may be grown.

The project began in 1980 with travel to the natural habitat and the Hastings River Orchid Society Spring Show on the mid north coast, New South Wales. Since then, many *D. kingianum* growers have encouraged us to assemble the information gathered from visits to many localities and collections, as so little was available to them in the orchid literature.

Information about origins, synonyms, history of well known plants and those of special merit have been lost as older generations of Australian orchid enthusiasts become inactive. Many hobbyists have grown significant plants, but did not record important historical information. A prime objective is to pass on results of research to identify key plants and reduce the common confusion of names that beset our initial collection. One of the most important parts of this book is the register of cultivars listed by colour categories. We do not claim to have assembled all of the significant plants, and to have discovered all the synonyms that are used for them in the history of the species. Adoption of the recommended approached to nomenclature and labelling of cultivars should greatly assist future collections.

Names are already confused. Several names occur in different collections for plants that are all derived from one original plant e.g. 'Ha Ha', 'Rosemary' and 'No 21' are the same collected plant. Different plants have been given the same name e.g. many plants have been called 'Gloucester Pink' and 'Gloucester Red'. General horticulture is full of synonyms and confused labels which are unlikely to ever be sorted out, as original details of collections and hybridisation have been lost, for example, azaleas, camellias, and rhododendrons. With *D. kingianum* we are near enough to the beginning of this process to set records straight. Expanding breeding lines of *D. kingianum* and its hybrids require accurate information of initial stock and parent plants. The recommended code of practice for naming, and register of plants in the latter part of the

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book are an attempt to record and clarify key information.

The *Dendrobium kingianum* Register of Plants in the Book

The register will enable the interested grower to:

- check on origins and parentage of selected named plants
- identify plants in collections with names which are synonyms for well known and previously named plants
- clarify obvious confusion of names using the descriptions, historical details of origin, and photographs
- plan a specialised collection of *D. kingianum*
- check the breeding lines and origins of new seedlings and crosses listed in catalogues
- aid in selection and ordering of seedlings and division from commercial catalogues
- adopt a system of naming using standard practices and recommended names
- appreciate the geographic, vegetative and colour variations of *D. kingianum* over the distribution range
- improve cultural techniques for different forms of *D. kingianum*.

Types of *Dendrobium kingianum* collections

- geographic collections of different plants
- colour forms
- plants with variable flowering from July to November
- natural plants or artificial seedlings
- high quality plants
- *D. kingianum* plants and natural hybrids from specific areas
- research collections.

New Approaches to *Dendrobium kingianum*

1. Terms for colours have previously been used very loosely. 'Red' is really purple and violet, and code as this, using the Royal Horticultural Society charts. 'Pink' is really various shades of mauve and lavender. It is less confusing to use the correct terminology when speaking formally about the species. Although 'pink' and 'red' are almost certain to continue in use in general discussion, a move towards more accurate use of colour terms is recommended.

2. Practice for labelling plants. There are many ways of setting up a labelling system. The main objective is to accurately pass on information and avoid confusing plants that may be difficult to differentiate, especially when not in flower.

Original information on labels should be maintained. Establish a book to enter each plant and record their origin, name, acquisition date and historical details. For larger collections consider giving each plant a number or your own initial or personal logo e.g. for our LA Orchid Collection "AF22"

(A. Flanagan Plant No. 22) is designated "LA373" (LA Plant No. 373).

Do not use the term "variety" for names you give your plant as this has a particular meaning in taxonomy. In the past varietal names have been used for certain specific plant descriptions, but have been of limited use. Simply use your name or number.

Never shorten names for convenience e.g. 'Corrigan's Red' x self should not be shortened to 'Corrigan's'. Unfortunately this does occur, and creates confusion with the original parent. Accurate recording of parentage of artificially bred plants is essential.

When naming plants it is best to select unusual or imaginative names. Names such as 'Gloucester Red' are too non specific. 'Karl Marx' is an example of a distinctive name. If imagination fails you, your initials and a number will be sufficient.

3. Developing collections. With increased availability of cultivars and seedlings, it is now possible to assemble a variety of quality plants. Divisions of outstanding plants are in limited supply, but are worth chasing. Supporting the breeders with regular orders will ensure they will continue to supply plants in future years. Many growers are not discerning enough when choosing plants from catalogue lists. Discuss your choice with experienced and knowledgeable people.

In terms of flower quality, growth rate and floriferousness, mauves are far ahead of any other colour and many are available as divisions. Growers must be prepared to pay a reasonable price for high quality divisions. The best method of selecting quality plants is obtaining divisions or aerials of plants seen in flower.

The keys to developing a significant collection are planning for adequate growing space, locating reliable sources, labelling plants systematically, and liaising with keen growers. Visits to see plants in the natural habitat can assist culture, and discussions with more experienced growers pays real dividends for those with such commitment.

4. Breeding Lines. These are well developed for purple but require expansion for white, mauve and yellow (see Australian Orchid Review April 1995 P.8)

5. Awarded Plants. The list is increasing, and has predominantly purple examples. Mauves are under represented and should be developed into specimens suitable for judging, as the mauves have superior characteristics for competition when considered as a group (see Orchids Australia April 1995 P.34)

Culture

We generally don't grow our plants well enough to achieve their full potential. In southern and central Queensland the location must be carefully considered. 'Albert West' struggles as a stunted poorly flowering plant in Gladstone, but further north is grown successfully on the Eungella Plateau at altitudes of 2,000 feet. A minimum altitude of around 1,000 feet is required north of Brisbane. The *Dendrobium kingianum* book sets out detailed cultural techniques which are beyond the scope of this article. Experience in our own collection has shown that, as with other orchids considered to be easy to grow, extra cultural effort and careful choice of plants is required for outstanding results.

Endnote

Dendrobium kingianum is a fantastic species in its wide and appealing variation of colour, flower and plant form, flower quality and quantity, and miniature and compact growing. It is the basis for successful breeding for shape and floriferousness in cool and hot/cold hybrid lines. The species seedling lines are improving rapidly and will provide exciting and satisfying results for competitive and general displays as well as further species breeding.

This is the state of mind reached when you invest a serious decade or two in pursuit of *Dendrobium kingianum* collecting, cultivating and conserving. None of the rewards of new insights, ideas and euphoria can be yours "unless you . . are prepared to . . do these crazy things".

Acknowledgments

I gratefully acknowledge the contribution of S.D. Lawson, co-author of the *Dendrobium kingianum* book, and the assistance of many enthusiasts who assisted studies in the field and in their collections.

References

P.B. Adams and S.D. Lawson 1995 *Dendrobium kingianum* — A Unique Australian Orchid. Publ. Central Queensland University Press.

P.B. Adams 1995 The breeding programme for *Dendrobium kingianum* Australian Orchid Review April Vol. 60 No. 2 P.8-11

P.B. Adams 1995 *Dendrobium kingianum.* Awarded and champion plants Orchids Australia, April P.34-37.

J. Elsner and R. Cardinal 1994 The Cultures of Collecting Publ. Melbourne University Press.

Dr. Peter B. Adams
School of Botany,
University of Melbourne, Vic.

The *Dendrobium kingianum* book is available from the AOR's Mail Order Bookshop.

Ira Butler and Bill Murdoch Trophies

Some important changes in 1996

At the February Meeting of the Ira Butler Trophy Committee it was decided to introduce a number of changes. These changes came in response to the increasing interest in Australian Native Orchids both hybrids and species in many Orchid Societies. These changes apply to ALL societies affiliated with the A.O.C. and/or A.C.N.O.S., ANOS Groups, State Orchid Societies or O.S.C.O.V.

The changes are as follows:—

1. Nomination for the Ira Butler Trophy may come from the winner of a section or class for Australian Native Orchid Hybrids of all Shows. Similarly the nomination for the Bill Murdoch Trophy may come from the species which is the winner of the class or section for Australian Native Species of a Show, or if there is no separate section, the Australian Native Orchid of the Show. For both trophies, nominations may come for plants which have been awarded an F.C.C., A.M. or H.C.C. by the A.O.C., State Orchid Societies, O.S.C.O.V., A.C.N.O.S. or any State A.N.O.S. Council.
2. There is one Gold Ira Butler Trophy for the Australian Native Orchid Hybrid of the Year and 10 Silver Trophies. Owners of all other plants nominated, including Awarded plants will receive a Certificate indicating that their plants had been nominated. There is only one Bill Murdoch Trophy. All other plants nominated, including Awarded plants, will receive a Certificate.
3. Nomination Fee. It was decided that each nomination for an Ira Butler Trophy should be accompanied by a fee of $10. No fee is necessary with the nomination for the Bill Murdoch Trophy.
4. Slide photographs. Three slides should accompany each nomination form, one showing the whole plant, one of the front view of one flower and one of an inflorescence to show a side view of some flowers. For Awarded Plants, owners should supply three slides for the Ira Butler Committee. Slides for the awarding body are the property of that body.

Further information is to be provided to all State Societies, O.S.C.O.V., A.N.O.S. and Native Orchid Society Groups, together with Nomination forms for both Trophies.

All owners of winning Australian native orchids at their Society's Shows, should see the Show Marshall to arrange for nomination and slide photos for the Trophies.

Welcome to all growers of Australian native orchids!

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

Orchid Culture Seminar

The Maroondah Orchid Soc. Inc. will be conducting a one day seminar on orchid culture on Sunday 7th of July 1996. The venue will be the Glen Waverley High School, O'Sullivan Rd, Glen Waverley, Melbourne (Melway's Directory Map reference 71 C2).

The venue is situated behind the Glen Shopping Centre and for those needing to travel by public transport a Railway Station is only 200 metres away.

The purpose of this event is to present the latest information on all aspects of orchid culture including potting mixtures; potting mixture pH (i.e. acidity/alkalinity) its effects and methods of controlling it; fertiliser chemistry, structure and purpose, and, environmental aspects and effects on growth.

Amateur growers or commercial growers seeking the latest information should not miss this seminar. The venue can comfortably accommodate between 200 and 300 people.

The cost of attending the seminar (per person) is $25.00 but the following early payment rate applies if application is made before 30th April: $22.50.

Payment may be by cheque or postal order. Payment will be accepted by Visa, BankCard or MasterCard, however because the Society has to make arrangement with another organisation the fee must be $25.00 (no discount) if this method of payment is used. See details below.

Applications must be received before 7th June 1996.

The registration fee includes morning and afternoon tea and lunch, a set of printed notes of the proceedings, and free samples.

There will be a lot to do and discuss during the day so the seminar must commence at 9 am SHARP and will finish at approximately 4.30 pm. Time will be set aside for questions and answers.

If there is a specific item those attending wish to have discussed then if a few details are provided with an application before 30th March they will be passed to the appropriate speaker.

To register you may either phone the numbers (below) for a form or simply send the appropriate payment to "Maroondah Orchid Society" c/- 1265 Western Port Hwy, Langwarrin, Vic 3910. Include your full name and address and phone number (if you have one), and the name of the Orchid Club of which are a member, and the name by which you are usually addressed (e.g. Tom, Betty, "Shorty", etc.).

Your registration will be confirmed and your admission pass will be forwarded by 14th June (late registrations excepted).

For registration forms or further details please phone one of the following:-

Bill Johnson (03) 9782-2668 (BH or AH), Barry Robinson (03) 9801-1628 (AH), Kathy Harris (03) 9729-3160 (AH) or on Mobile (015) 094 975 (AH). (BH indicates you may phone during business hours and AH evenings or weekends).

If paying for registration by credit card, you must phone (03) 9782-2668 only and ask for Bill Johnson.

The Speakers

Subject to unforeseen events, and final acceptance, the speakers will include the following:—

Susan Walter B.Sc. (Ag) Hons. Susan, who is a Director of WestGro Pty. Ltd., is a highly qualified Agricultural Scientist. Susan was for some years in charge of research at PineGro Products, one of Victoria's largest processors of pine bark and manufacturers of pine bark based potting mixes and she is now Director in charge of Research at WestGro and is therefore eminently qualified to discuss all aspects of using pine bark a medium for potting mixes and plant nutrition.

Wayne Turville: Wayne will be known to most orchid growers both in his capacity as Manager of Collector's Corner and as an expert grower of Paphiopedilums and Native Dendrobiums. What may not be known is that Wayne is now in charge of a huge nursery operated by Paradisia Nurseries — the owners of Collector's Corner — and in that capacity he has been overseeing large scale research on potting mixes, fertilisers and growing conditions for orchids. He will be relating his experiences and his results and showing examples of what can be achieved.

Brian Noble: In the short time that Brian has been involved in Orchid Societies he has gained a well earned reputation as a grower par excellence. Brian will show you some of his work and how he does it.

Bill Johnson: Bill is Managing Director and part owner of Glenwood Orchids Pty. Ltd. and is well known for his writings in the Australian Orchid Review. He will be demonstrating how easy it is to understand fertilisers, what your plants need and why, the damage caused by an acid potting medium and the benefits from well adjusted acidity levels, greenhouse design ideas, simple pest control, and, how to fine tune your growing environment.

Bill has also prepared, as part of the notes to be provided, a very enlightening set of comparisons of the contents of all popular fertilisers used by orchid growers and he will show you how to use this information.

OTHER SPEAKERS: Other speakers are yet to be confirmed who will discuss an introduction to fertiliser chemistry, pH meters, pH what it is and how it effects your plants and how to control it.

pH is at last being recognised as a vital part of growing orchids in pots and yet it is so easy to control. Acidity kills more orchids than anything else. If the roots of your plants are rotting this segment alone will make attendance worth while.

pH TESTS: Applicants may bring two water samples (100 mils); (1) a sample of the local water used on your orchids and (2) a second sample of water which has first been run through a pot. This must be limited to one set of samples per family. Both will be tested for pH — FREE during the day.

STATIC DISPLAYS: Examples of just what can be produced by utilising the information to be discussed at this seminar will be on display for everyone to see. Slides will also be shown during talks. EACH person registering will receive a set of comprehensive notes of the proceedings.

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New Roses to Bloom at Sydney Garden Festival

The hardy annual Sydney Garden Festival is well on track for a successful 1996 autumn gardening exhibition from Thursday April 11 — Sunday April 14 at Darling Harbour. And it's shaping up to have a big entry of roses this year. Last year's festival hype on Meilland's 'Spirit of Peace' rose from Ross Roses of Adelaide, has prompted another major commercial SA rose grower, St. Kilda Roses, to make a big splash at the Sydney event.

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AOR 043

propagating their own varieties.

One new rose to be launched at the festival, currently under wraps and due for an October retail release, is tipped to be the star variety on show at this year's festival.

Autumn sees roses at their best. Other specialists in this area are Eureka Roses, Ross Roses, Flowers by Fax and another newcomer to the festival, Fradee Miniature Roses.

"Those who fell in love with the apricot/buff 'Spirit of Peace' in '95, must not miss our launch of 'Courage' — a crimson bush rose, the perfect foreground for the gorgeous 'Spirit of Peace' standard variety," said Peter Trenorden of Adelaide's Ross Roses.

The festival, again in Darling Harbour's perfect glass-fronted exhibition centre, will fill two halls and 10,000 square metres of space over four days from Thursday to Sunday April 11-14.

Organiser, Total Concept Exhibitions, expect a full house of over 150 exhibiting companies, flower and plant societies, florists, landscape gardeners and gardening product manufacturers. This year's charity exhibit will be The Royal NSW Institute for Deaf & Blind Children.

Major nurseries will include famous brand names in seedling and potted colour such as Newports and Craigies. Newports promise the return of their flora carrousel — by popular public demand.

The festival continues to attract more orchid growers. Top displays will be produced by The Orchid Society of NSW as well as Orchids by Growing Point and the new Wright's Way Wholesale Nursery.

Associations taking part to date will cover African violets (including updates on the new yellow variety), bromeliads and Australian plants.

Visitors may recall the beautiful displays by Illuminated Landscapes in the past two shows. Newly named, The Landscape Company, the company promises a spectacular display as the show's centrepiece between both halls.

The show is pretty — and it's also practical: a strong marketing vehicle for the $2-billion plus a year gardening industry. Technology brings the latest irrigation and hydroponic systems; solar powered garden lighting; and worm farms for composting. A new releases plant section has been a valuable facility for commercial growers to introduce upcoming retail varieties to the gardening public.

Since the inaugural show in 1990, the festival's success has depended on its broad spectrum of interest including not only plants but also other aspects of the garden such as exotic fish — The Koi Society — as well as aviaries with birds. Taronga Zoo presents its very popular 'meet a creature' display.

There's top advice from experts: Graham and Sandra Ross of Radio 2GB and Channel Seven have a theatrette for their gardening clinic; arborists, landscape architects and nurseries all have experts on hand.

Competitions include Workskills Foundation with its landscape construction competition for young landscapers. Professional florists compete with displays of wedding bouquets and hotel floral arrangements. Nurseries compete with 'best idea' garden displays.

Gardeners are avid travellers, so the festival also has holiday destination exhibits, all with floral themes: Toowoomba's Garden City and Canberra's Floriade are among a variety of travel exhibits.

Further information is available from Festival Director, Mrs Nancye Castle, on (02) 436 3266 or fax: (02) 439 7040.

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AOR 069

Two Speakers . . . Both Fair Dinkum!

The 1996 Gala Orchid Fair is to be held at Ballina R.S.L. on Mothers' Day weekend (May 11 and 12). This year sees the addition of a new feature which is the Gala Banquet. To be held on Saturday night of

the fair the banquet is not just another dinner. The enterprising organisers have arranged two international speakers who will both have fair dinkum Aussie approaches to allied topics that should be easily understood by all in attendance. Advertising for the event is seen around the world on the Internet.

Lead speaker will be Dr. Geoff Stocker, Director of the Papua and New Guinea Forest Research Institute. Geoff has spent a large portion of his life growing intermediate and cool growing New Guinea species. He is such a popular speaker, that he will also lecture at the 15th World Orchid Conference in Rio, Brazil later this year. Geoff's topic will be entitled "P.N.G. Species — Towards a Better Understanding of Cultural Requirements". Naturally it will include a large number of habitat slides that will be of immense interest to all who attend. This will help all growers understand the real needs of these orchids.

Keynote speaker on the night will be Mr. Ron Maunder of Paradise Orchids, Tauranga, New Zealand. Ron has a long and successful record in the orchid industry and of recent times has pioneered intersectional breeding of Highland and other bell shaped dendrobiums. His topic for discussion at the Gala Banquet is "New Colours in Dendrobium Species Using Other Sectional Species". Like Geoff Stocker Ron will bring with him many slides of his revolutionary work.

As a bonus those who attend the Gala Banquet will have the first Australian opportunity to purchase Ron's flasks. These two speakers are as fair dinkum as you would find anywhere and a great night is assured for all with fresh seafood as good as the speakers.

The demand for seats is strong and those interested should book soon with the organisers. (See Advt. page 18.)

More than 20 of the leading orchid nurseries from between Sydney and Hervey Bay will display their wares at the Gala Orchid Fair. Also, a show will be conducted by the Northern Rivers Orchid Species Society, with excellent incentives to bench species and hybrids this promises to be a top class show. Ballina R.S.L. is a great venue being N.S.W. "Club of the Year" in 1995 and offers patrons excellent facilities for the whole weekend.

Visitors by coach will be welcome and should contact the organisers for special offers and incentives. Ballina Orchid Society conducts an orchid show on the days leading up to and including the Saturday of the Gala Orchid Fair at "Ballina Fair" Shopping Centre.

With many tourist opportunities to add to the Gala Orchid Fair, northern N.S.W. offers plenty for visitors from near and far. For further information please contact Grant Smith Phone: 066 28 1438; Fax: 066 281 999, or Murray Shergold Phone: 066 822 635 Fax: 066 822 605 or Email to: murgold@nor.com.au

New Advanced Diploma in Horticulture

The horticulture industry has undergone great changes over recent years. In the past, a large amount of horticultural work involved manual tasks performed by unskilled or semi skilled labour. Today many such jobs have been replaced by skilled operators using technologies that allow one person to perform the same which many would do in the past.

Despite an overall decline in numbers being employed in some sectors of the horticulture industry, there has been a significant increase in the demand for skilled labour. The Australian Correspondence Schools has recently developed an Advanced Diploma in Horticulture, in response to such changes in industry.

The new advanced diploma is one of, if not the first, advanced diploma, to be accredited under DEETs new National Framework for Training.

Work opportunities for graduates are varied, and may include:

— management of parks and recreation, gardens, nurseries, crop production etc,
— technical services such as research or consultancy,
— sales and marketing of horticultural industry equipment and services,
— horticulture industry trainers (teaching TAFE, unemployment programs etc),
— landscape design, horticultural journalism, and more.

The Advanced Diploma in Horticulture is a new three year vocationally oriented course, designed to provide training for a career in any of these areas.

This is a competency based course, and "is recognised within the Australian Qualifications Framework"; a new system introduced throughout all Australian states and territories in 1995.

Students are given the opportunity to develop specialist skills of their own choosing, by selecting approximately half of the modules studied from a variety of areas, including: Nursery Management, Landscaping, Crop production, Parks and Recreation, Turf, Arboriculture, Hydroponics, Propagation, Permaculture, Organic Plant Culture, Plant Protection, Herbs, Native Plants, Roses, Orchids, Cut Flowers etc.

These options will be expanded in the future.

The full course involves 2550 hours of study, spread over 3 years full time, or 5 to 7 years part time.

The course has been designed to give the graduate skills which are becoming necessary in the workplace. For example, all graduates will hold a qualification which allows them to teach in vocational education (eg. TAFE or Jobskill programs).

Course fees, covering texts and tuition are $5950, plus exams.

Further details: A.C.S. P.O. Box 2092, Nerang East, Qld, 4211 Ph: (07) 5530 4855 or 264 Swansea Rd, Lilydale, Vic, 3140 Ph: (03) 9736 1882.

Major Orchid Show in WA

Wanneroo Orchid Society co—ordinates a Major Show in the City Centre of Perth.

Date being 18th. August to 24th. August '96. Venue, Forrest Place Perth.

Registration of plants is from Saturday 17th. August 12.30 to 7.30pm. This gives entries a chance to set up displays.

The Show follows a 'Theme'. This has not been decided as yet.

Participants may enter as individuals or in a society display.

Society members compete against each other to come up with the best display.

Commercials also enter in this event. Commercials sponsor Prize monies. Judging is carried out at 9am on the 18th. August, 1996.

On the 24th August the event closes at 3pm. Major prize winners are presented with Certificates from the City of Perth.

Melbourne International Flower and Garden Show

This month, Melbourne will be host to a major event on the International floriculture and horticulture calendar. The inaugural Melbourne International Flower and Garden Show will be held from 18-21 April 1996 at the Royal Exhibition Buildings and the beautiful surrounding Carlton Gardens.

This new show combines the Australian National Flower Show and Garden Week and has been nominated one of Melbourne's Hallmark Events, alongside the Grand Prix, the Melbourne Cup and the Australian Open Tennis. More than 100,000 people are expected to attend this spectacular show.

The Garden State is the perfect stage for the largest garden extravaganza in the Southern Hemisphere, already compared to the Chelsea Flower Show (UK). With a $2 million budget and the support of the Victorian Government, the City of Melbourne and Tourism Victoria, The Melbourne International Flower and

Garden Show heralds a new era in the horticulture and floriculture industries.

The Nursery Industry Association of Victoria and the Victorian Farmers Federation Flowergrowers Group who have successfully conducted Garden Week and The Australian National Flower Show respectively and will join together for this important presentation for both industries. Future plans for the Melbourne International Flower and Garden Show will include an International Horticultural Convention expected to attract visitors from all over the globe.

Visitors will have the opportunity to learn about every aspect of flowers, gardens and gardening from a plethora of experts. Australia's leading floral designers will demonstrate their significant talent with innovative floral displays. Demonstrations and workshops and an extensive entertainment program will enhance the show's appeal to all sections of the community.

A gala charity preview on the 17th April will be the social event of the year with all proceeds going to the Royal Women's Hospital.

Show starts 9am daily and closes 6pm Thursday, 9pm Friday and Saturday, and 6pm Sunday. Admission for daytime viewing $15 for adults, $5 for children. After 4pm Friday and Saturday, $10 for adults, $3 for children. Concessions apply for Senior Citizens, Pensioners, Unemployed, Students, Families and groups of ten or more.

For further information please contact: Ann Morrison Public Relations Ph: (03) 654 6936 Fax: (03) 654 6947.

Autumn Show

The Mornington Peninsula Orchid Society of Victoria will once again be holding its Autumn Show on May 18th-19th at the Frankston High School Hall, Towerhill Road Frankston. This year we will again be extending an invitation to three other major Victorian clubs and various commercial growers to join us on this occasion. All orchid enthusiasts and the public in general are most welcome to come along.

There will be something for everyone, from potting demonstrations and orchid advice to the latest in orchid flowering plants and seedlings.

Refreshments will be made available throughout the day at prices that will be sure to please. So why not make a day of it for the family or for friends with the help of the friendly Mornington Peninsula club members — *C. Kozlowski*

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Easy-to-use, SaturAid can be sprinkled over your garden and lawn, or at planting time SaturAid can be dug into your garden beds. The name says it all. An aid to efficient, thorough saturation.

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There is now a four kilo box featuring an easy-to-carry handle. That's enough to take home and SaturAid the backyard and it costs less than twenty dollars.

In addition to the regular 750 gram jar, there is now a 300 gram shaker, enough for 17 twelve inch pots or baskets and new 50 gram sachet — just enough for a few pots. That's 25 per cent more than the old 40 gram sachet and it costs the same, That's another SaturAid saving.

Sprinkle SaturAid and you'll need less water to keep your garden lush and green over Summer.

For further information contact: Chris Drysdale: Ph: (059)77 4755 Fax: (059)77 4921 or Hal Guilday Ph: (03)827 1130 Fax: (03)824 1731.

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AOR 007

Fifty-five Years Ago

In the last article of this series I made mention of C.O. Dunn's scolding of those of us who do not keep adequate records. To illustrate his point that record-keeping is of great benefit to our hobby, he chose to discuss the recording of hybrid parentage. I would like to support Mr. Dunn, as it was in the very matter of parentage of early hybrids that I got tangled up in the preparation of an earlier piece for this column (August 1995, p. 39). Now I should like to set the account straight — that is as best I can from the records I have been able to unearth.

That which is in question is the identity of the first artificial intergeneric hybrid to flower. I had submitted my copy nominating *Laeliocattleya exoniensis*, when I read another source which declared that *Dossinimaria* Dominii had flowered earlier. Accordingly, I altered my copy. Having now consulted further sources I believe that *Lc. exoniensis* was the first to flower, in 1863, while *D.* Dominii was exhibited, in 1861, solely for its jewel foliage but was not in flower. For those readers who may be interested, the sources consulted are given below.

Burbridge, F.W. 1871 Seedling Orchids. *Gardeners' Chronicle*, January 14, 1871, pp. 43-44. This article lists 18 hybrid orchids "with their parents where known".

Rolfe, R.A. 1893. The History of Orchid Hybridisation. Part I. *Orchid Review* 1:pp. 3-6. This article includes a chronological list with comments on parentage etc.

O'Brien, J. & others, 1899. Hybrids and their Raisers, un-numbered part. *Gardeners' Chronicle* 26, No. 655. July 15, 1899, pp. 41-46. This miscellany contains autobiographical notes on John Seden, who continued Dominy's work with Veitch & Sons, together with notes on British and Continental hybridists and line-breeders.

Sanders [1946]. Sanders' Complete List of Orchid Hybrids to January 1st 1946. Sanders (St. Albans) Ltd.

The eight hybrids listed below are the first eight from Rolfe with his comments. Annotations from Burbridge and Sanders have been included where warranted. No attempt has been made to alter the original nomenclature.

1. *Calanthe* X Dominii flowered October 1856; parents *C. furcata* and *C. Masuca*; made by John Dominy at Veitch's Exeter Nursery; the first artificial orchid hybrid to flower. Sanders records as *Calanthe* Dominyi.

2. *Cattleya* X *hybrida* flowered August 1859; parents were variously given as *C. granulosa* and *C.* Harrisoniae, then *C. granulosa* and *C.* Loddigesii, then *C. guttata* and *C. intermedia*. Rolfe points out that while these species were then confused, "the plant characters leave little room for doubt that *C. guttata* and *C.* Loddigesii were the parents". He also comments that the importance of record-keeping was not fully recognised at that time. Sanders agrees with Rolfe's species as parents but declares this orchid to be a natural hybrid. Burbridge names the parents as *C. granulosa* and *C.* Harrisoniae.

3. *Cattleya* X Dominiana flowered November 1859; parents *C. maxima* (seed parent) and *C. intermedia*. Burbridge omits parents thereby suggesting they were unknown to him.

4. *Calanthe* X Veitchii flowered December 1859; parents *C. rosea* (*syn.* Limatodes *rosea*) and pollen of *C. vestita*. Sanders gives the date 1860 for this hybrid.

5. *Goodyera* X Dominii exhibited June 1861; parents *Goodyera discolor* and *Anoectochilus* Lowii. Rolfe states that the parents are in fact *Haemaria discolor* and *Dossinia marmorata*. Sanders agrees with this parentage and records the hybrid name as *Dossinimarie* Dominyi.

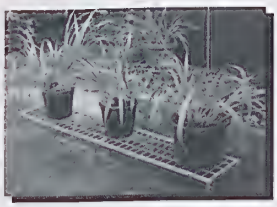
6. *Goodyera* X Veitchii exhibited July 1862; parents *Haemaria discolor* and *Mascodes petola syn. Anoectochilus* Veitchianus. Burbridge gives the parents as *Goodyera discolor* and *Anoectochilus* Veitchii. Sanders records the parents as *Haemaria discolor* and *Macodes petola* and the hybrid as *Macomaria* Veitchii.

7. *Cattleya* X Aclandi-Loddigesii flowered 1862; (later called *C. Brabantiae*); parents *C.* Aclandiae and *C.* Loddigesii (seed parent).

8. *Cattleya* X *exoniensis* flowered September 1863; parents *Cattleya* Mossiae and *Laelia purpurata* but later said to be *C.* Mossiae and *L. crispa*, while Rolfe prefers *C. labiata* and *L. crispa*. Burbridge listed the two earlier parents, while Sanders lists the two last mentioned and gives the hybrid the name *Laeliocattleya exoniensis*. Rolfe wrote of this plant: "At all events, it was a generic cross, probably the first one to flower; for the two Goodyeras just mentioned were grown for their foliage, and there is no record of their having flowered."

There are many secondary sources for these reports not all of which agree in their treatment. I feel that the citations herein set the matter at rest.

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AOR 088

Seed Maturation Research Conclusions

Continued from February 1996, AOR

Later notes:

Seed germination lime: Also depends on type of parent (bifoliate, monofoliate, *Epi, B, Lc,* etc. and on how ripe seed is. Greener seed takes a lot longer than ripe. 110 days to a definite protocorm — or longer.

Sterilize RIPE seed in 50% Clorox for 3 minutes, rinse and/or filter seed, then sow.

Phalaenopsis, Doritaenopsis, and some other *Sarcanthinae* can be figured at 120 days.

There seemed to be a minor problem with variation in seed maturation time that I first theorized as being caused by the differing growing conditions.

For example, *C. bowringiana* 'Profusity' matured one capsule in just 970 hours and there were plenty of viable seeds. The next capsule on the plant took 1533 hours and was barely acceptable as to germination rate. The next two were still green and non-viable at 2000 and 2200 hours!

The question became: were the seeds undergoing a reverse maturation process cycle?

At 2500 hours, the capsules produced 90% and better viability, so what was the mechanism?

The 970 hour capsule had the stem damaged by an insect, so the explanation for that one seemed to be a natural process that speeded maturity. I purposely damaged several capsules in various ways to study it, finding damage to the stem just before the capsule resulted in a rapid maturing of the seeds in many varieties. Damage to the stem nearer the plant or to the pseudobulb itself affected nothing in the maturation time.

There seems a rather high percentage of crippling in the resulting plantlets among the damage-matured seeds, so it is not a recommended method for speeding up the process.

There was also minor damage to the stem of the 1533 hour capsule, if I remember correctly, but that was not in the notes and is suspect.

That variation is logically explainable. I allow 2600 hours for C. *bowringiana* 'Profusity' for seeds I wish to raise.

The next problem was variation when there was no damage and when there was no variation in conditions. This was accomplished by making two crosses on the same bloom stem of the same plant and was a two-parter, in that it was also a good time to determine if the pollen parent affected seed maturation.

I doubted strongly that it would.

It was far from the first time I was wrong.

A few examples of the 31 test plants were different pollen parents were used: (22A) *Lc.* Dingaret 'Dave's' X *B. digbyana* 'Shapely' next to (22B) *Lc.* Dingaret 'Dave's' X *Bc.* Del Rosa 'Lines'/1900 hours (22A) was 90% viable while (22B) was green. 20% viability.

I used the cross because both were used in many other experiments and both were 90% viable in that one.

Example: (13A) *Lc.* Peggy Huffman 'Dave's' X *Slc.* Anzac 'Orchidhurst' next to (13B) *Lc.* Peggy Huffman 'Dave's' X C. Hawaiian Comfort 'Pepe' / 2160 hours (13B) dehisced, 90% viable, while (13A) was immature, though viability was over 80%.

Example: (4A) *Diaca.* Chastity 'Fragrance' X *Slc.* Anzac 'Orchidhurst' next to (4B) *Diaca.* Chastity 'Fragrance' X *Blc.* Greenwich 'Elmhurst' next to (4C) *Diaca.* Chastity 'Fragrance' X *Lc.* Princess Margaret 'The Prince'/840 hours ALL were mature.

The maturation times of all 6 instances where the same pollen parents were used on both capsules were identical.

Conclusion: There is a variable dominance factor in seed development, sometimes in the capsule parent and sometimes in the pollen parent.

That means the genes of the forming embryo can somehow effectively "Turn on" the development rate mechanism in the capsule parent. Rather hard to accept – and a bit scary!

While the test was small-scale, the research should be pursued. I don't have the facilities, funds, nor controls to make a major project of it.

Another thing that came out of the flasking media research was that greenpod culture seems to be a lot less than it appears on the surface.

As an example, *Lc.* Verelli 'Pink Imp' X *C. bowringiana* 'Profusity' capsules were taken at 840 hors., 1000 hrs., and when dehisced, at 1380 hrs. Germination was 75% at 840, and took 744 hrs. At 1000 germination was over 90% and took 492 hrs. At dehiscence (1380 hrs.), it was over 90% and took 432 hrs.

840 + 744 = 1583. 1000 + 492 = 1492. 1380 + 432 = 1442.

More startling, *Lc.* Blue Boy 'Sarasvati' X *Lc.* Peggy Huffman 'Dave's' was taken at 1680 hrs. and at 2012 hrs. (I consider the seed "ripe" at 90% of dehiscence time = 2200 hrs. for 'Sarasvati'), or when ripe.

Germination was over 90% for both, but for 1680 was 430 hrs., while for 2012 it was only 168 hrs.! Germination in 14 days, which was in the range for 'Sarasvati' on ripe seed (13-16 days. It is my fastest germinator)!

The results were much the same with other crosses. Greenpodding actually COST time!

In addition, the sterilization process I use on mature seed (50% Clorox for 3 minutes) meant there was no virus in the ripe seeds, even from parents that were infected. My theory is that virus is on, not in, the seeds where a parent is infected, and that the Clorox kills it because it is necessarily exposed. If the seed is immature to the point the coating is still "soft", the sterilant will damage or kill the seed. Ripe seed has a harder coat that the Clorox doesn't penetrate.

I can theorize that embryo maturation continues in many of today's symbiote substitution cultures, but more slowly than in the capsule. The seeds mature in the culture before beginning growth, in other words.

C.D. Moulton
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AOR 123

New Orchid Hybrids

JULY/AUGUST/SEPTEMBER 1995 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
ADACIDIUM		
North Cascades	*Ada keiliana* × *Onc. Jamie Sutton*	Baker & Chantry
ASCOCENDA		
Aroonroj	*V.* Keeree's Delight × *Ascda.* Yip Sum Wah	T. Orchids (R. Viraphandhu)
Bloody Mary	*V.* Charungraks × *Ascda.* Peggy Foo	O. Diaz-Quirindongo (O/U)
Blue Eyes	*Ascda.* Peggy Foo × *V.* Gordon Dillon	J. & I. Selles (O/U)
Chartreuse Gold	*V.* Charles Goodfellow × *Ascda.* Jiraprapa	J. & I. Selles (O/U)
Hamlyns Jean	*Ascda.* Mangkiatkul × *V.* Amphai	Claude Hamilton
Lilla Hamilton	*V. sanderiana* × *Ascda.* Irene German	Claude Hamilton
Macknade	*V.* Pranerm Ornete × *Ascda.* Haad Ravai	T. Hobden (O/U)
Palmaston Lisa	*Ascda.* Rosemary × *Ascda.* Peggy Foo	R. Hawkes
Peanut Butter	*V.* Thailand Gold × *Ascda.* Madame Kenny	O. Diaz-Quirindongo (O/U)
Rosemary	*V.* Memoria Madame Pranerm × *Ascda.* Danny Low	R. Hawkes (O/U)
BRASSIDIUM		
Memoria Hayden Evason	*Brs. brachiata* × *Onc. sphacelatum*	C. Atyeo
BRASSOCATTLEYA		
Euridice Caetano	*C.* Enid × *Bc.* Pastoral	R. B. Cooke (E. Porto)
BRASSOLAELIOCATTLEYA		
Angelyn Holt Hooks	*Blc.* Lucky Strike × *Lc.* Candidate	J. Grezaffi
April Lee Ferguson	*Blc.* Waikiki Gold × *C. aclandiae*	R. Ferguson
April's Midnight	*Blc.* Oconee × *Blc.* Doctor von Braun	R. Ferguson
Bruce Randell	*Blc.* Fantasy Maker × *Blc.* Oconee	B. N. Jones
Castle Emerald	*Blc.* Cadmium Light × *Lc.* Chine	R. B. Cooke
Castle Heritage	*Blc.* Waikiki Gold × *Blc.* American Heritage	R. B. Cooke
Castle Princess	*Blc.* Enid Moore × *Blc.* Pastoral	R. B. Cooke
Castle Treasure	*Blc.* Waikiki Gold × *Blc.* Eve Marie Barnett	R. B. Cooke
Chincogan	*C.* Hawaiian Jewel × *Blc.* Burdekin Bells	G. Vallance (K. Norman)
Chivas	*C.* Moscombe × *Blc.* Alma Kee	W. H. Huang
Cosmic Dream	*C.* Brabantiae × *Blc.* Chancemaker	Dogashima
Elizabeth Hamilton	*Blc.* Fortune × *Lc.* Joan Haig	Claude Hamilton
Erica Porto	*C.* Mary Lynn McKenzie × *Blc.* Enid Moore	R. B. Cooke (E. Porto)
Ferguson's Black Cat	*Blc.* Oconee × *Lc.* Cecile Simmons	R. Ferguson
Floralia's Charm	*Blc.* Jane Helton × *Blc.* Fortune	R. B. Cooke (R. Altenburg)
Great Hero	*Blc.* Waikiki Gold × *Blc.* Love Sound	Dogashima
Hamlyn's Green Imp	*Blc.* Green Giant × *B. cordata*	Claude Hamilton
Hamlyn's Jade	*Blc.* Memoria Helen Brown × *B. cordata*	Claude Hamilton
Hamlyn's Magic	*Lc.* Jalapa × *B. nodosa*	Claude Hamilton
Larisa May Jones	*Blc.* Fantasy Maker × *Blc.* Fortune	B. N. Jones
Lorna May Jones	*Blc.* Oconee × *Blc.* Trojan Gold	B. N. Jones
Maui Mango	*Blc.* Fortune × *Blc.* Meditation	D. Benzo (O/U)
Mendenhall Wine	*Blc.* Oconee × *Lc.* Wine Festival	B. N. Jones
Mercy Tulier	*Blc.* Waikiki Gold × *C.* Walkerinter	R. Rodriguez
Michiyo Ayumu	*C.* Empress Bells × *Blc.* Atsumi Purple	T. Miura
Only CuCu	*Blc.* Oconee × *B. cucullata*	R. Ferguson
Paradise Twice	*C. bicolor* × *Blc.* Ports of Paradise	R. B. Cooke
Penny Ann	*Bc.* Pastoral × *L. anceps*	A Salzman
Phillmax	*Blc.* Makaha Gold × *B. nodosa*	Claude Hamilton (K. Phillips)
Pisgah Daybreak	*Bc.* Daffodil × *Blc.* Apricot Flare	Owens Orchids
Pisgah Harvest	*Blc.* Apricot Flare × *Blc.* Helen's Fortune	Owens Orchids
Pisgah Honor	*Blc.* Miya's Glow × *Blc.* Faye Miyamoto	Owens Orchids
Pisgah Imperial	*Blc.* Fort Watson × *Blc.* Oconee	Owens Orchids
Pisgah Raspberry	*Blc.* Toshie Aoki × *Blc.* Edisto	Owens Orchids
Pisgah Royale	*Lc.* Royal Emperor × *Blc.* Royal Splendor	Owens Orchids
Robert Ferguson	*Blc.* Oconee × *Blc.* Golden Slippers	R. Ferguson
Royal Dynasty	*Blc.* Sun King × *Lc.* Yellow Skin	R. B. Cooke (R. Altenburg)
Royal Treasure	*Blc.* Sun King × *Lc.* Amber Glow	R. B. Cooke (R. Altenburg)
Singapore Pirate	*Bc.* Languedoc × *Blc.* Pirates Quest	R. B. Cooke (E. Porto)
Spring Sea	*Lc.* Little Sunbeam × *Bc.* Daffodil	Suwada Orch. (O/U)
Sunstate Eminence	*Blc.* Francis Y. Hoshino × *Lc.* Elizabeth Off	B. N. Jones
BROUGHTONIA		
Little London	*negrilensis* × Seagulls Jamaica	Claude Hamilton

NAME	PARENTAGE	REGISTERED BY
CATTLEYA		
Bobbie's Novalty	Guatemalensis × *intermedia*	J. Grezaffi
Cosmo-Pearl	Angelwalker × Lynn Spencer	Kokusai
Memoria Jorge Schueler	Tiffin Bells × Edithiae	R. B. Cooke (E. Porto)
Memoria Kathleen Moller	Mary Ann Barnett × Princess Bells	B. N. Jones
Mother Enid	Enid × Mother Dominican	R. B. Cooke (R. Altenburg)
CATTLEYOPSISTONIA		
Memoria Bill Osment	*Ctps. lindenii* × *Bro. negrilensis*	Claude Hamilton
CATTLEYTONIA		
Hamlyn's Aura	*Bro. negrilensis* × *C.* Dual Aura	Claude Hamilton
Hamlyn's Flared Tartan	*Bro. negrilensis* × *Ctna.* Orglade's Little Lover	Claude Hamilton
Hamlyn's Red Bug	*Bro.* Little London × *Ctna.* Elsie Adams	Claude Hamilton
Henry Wan	*Ctna.* Why Not × *Bro. negrilensis*	Claude Hamilton
Jamaica Jewel	*Bro.* Seagulls Jamaica × *Ctna.* Keith Roth	Claude Hamilton
Selsal's Little Jewel	*Ctna.* Why Not. × *C. intermedia*	J. & I. Selles
CHRISTIEARA		
Mae Sod	*Aër. fieldingii* × *Ascda.* Aroonsri Beauty	R. Viraphandhu
CIRRHOPHYLLUM		
Mandarin	*Cirr. fascinator* × *Bulb. psittacoglossum* †	K. Dreithaler
CYMBIDIUM		
Aussie Rules	Kurun × Ruby Eyes	S. Lenkic
Beau Guest	Coraki × May Hopcraft	Guest (Geyserland)
California Ablaze	Painted Doll × Geisha	Rowland Collection
Coco Jim	Solana Beach × Terama	Sims (Mills)
Crystalline	Magpie × Mary Ann	Santa Barbara (W. Romanoff)
Fumi's Pik	Belle Glade × Olymilum	Shogo Sato
Gloria Streeter	So Bold × Mighty Mouse	R. Streeter (Geyserland)
Little Aussie	*pumilum* × Sussex Dawn	N. Bishop (O/U)
Lloyd's Persistance	Pee Wee × Peter Pan	Rowland Collection
Mama Loo	Mimi × Joann Manago	Shogo Sato
Rebekah Akehurst	Winter Wonder × Little Aussie	N. Bishop (H. Podobransky)
Surman's Rose	Lancashire Rose × Via Del Playa	C. Surman (Schaefers)
Susan Arlien	Sweetheart × *canaliculatum*	Rowland Collection
Veronica Hoffmann	Pendragon × Claude Pepper	Guest
DACTYLORHIZA		
Aschersoniana §	*incarnata* † × *majalis*	Lowland-Biotech (P. Stein)
Glendora	*incarnata* × *elata*	Lowland-Biotech (P. Stein)
Latirella §	*purpurella* × *incarnata*	Lowland-Biotech (P. Stein)
Odessa	*praetermissa* × *iberica*	Lowland-Biotech (P. Stein)
Wintoni §	*incarnata* × *praetermissa*	Lowland-Biotech (P. Stein)
DENDROBIUM		
Alex Lee	Queen Cobra × Yong Kok Wah	Lee Huat Lai
Anne Vanderwolf	Wee Mary × *capra*	R. McVeigh
Classy Lassie	Gulfstream Blue × *lasianthera*	Orchid World Int. (O/U)
Daniel Lee	Memoria Lee Seng-Kee × *phalaenopsis*	Lee Huat Lai
Desert Rose	Bardo Rose × Hastings	R. & D. Sheen (D. Mitten)
Elegant Coral	Lorikeet × Hilda Poxon	W. T. Upton
Elegant Jewell	Elegant Heart × Harold Hirsch	W. T. Upton
Francis Lee	Emerald Beauty × *bigibbum*	Lee Huat Lai
Gillieston Blaze	Brinawa Charm × Lynette Banks	Florafest (W. Skillicorn)
Hamlyn Pearl	Jaquelyn Thomas × Marado	Claude Hamilton
Hamlyn Superstar	Pinky Sem × Makapuu Ann	Claude Hamilton
Hildale	Hilda Poxon × Elladae	N. Mitchell
Hule's Carnival	Autumn Show × Emerald Delight	Lee Huat Lai
Hule's Classic	Kristen Ann × Emerald Beauty	Lee Huat Lai
Hule's Dream	Anna Bibus × Emerald Delight	Lee Huat Lai
Hule's Pink Doll	Memoria Lee Seng-Kee × Emerald Delight	Lee Huat Lai
Hule's Pinky	Emerald Beauty × White Wine	Lee Huat Lai
Hule's White Magic	Autumn Show × Anna Bibus	Lee Huat Lai
Impact Stripes	Joea-Joea Bibus · Kiilani Stripe	Impact Orchids
Jessie Anne deBruyne	Minnie Bold Stripes	V.C. de Bruyne (Ong Boon Thuan)
Karen Anne deBruyne	Black Spider Claudia	J. de Bruyne (Ong Boon Thuan)
Kayell	Ellen Hewitt Sun	N. Mitchell
Kay's Choice	Pinterry Dot Sheen	N. Mitchell
Lemon Twist	Lani-Girl · *antennatum*	S & W
Little Digger	*johannis* × Autumn Lace	G. Rex
Makapuu Ann	Makapuu × Kristen Ann	Claude Hamilton (O/U)
Marado	Marianne Bates × Dorado	Claude Hamilton (O/U)

NAME	PARENTAGE	REGISTERED BY
DENDROBIUM continued		
Memoria Ian McConnell	Pale Doreen × *phalaenopsis*	Claude Hamilton (I. McConnell)
Memoria Khoo Yew-Theang	Emerald Beauty × Hickam Deb	Lee Huat Lai
Memoria Lee Seng-Kee	Emerald Delight × *phalaenopsis*	Lee Huat Lai
Phillip Hamilton	Dao Prasuk × Pinky Sem	Claude Hamilton (P.E. Hamilton)
Pink Candy	Jock's Candy × *phalaenopsis*	R. McVeigh
Piyamal	Montakan × *bigibbum*	T. Vajrabhaya
Ray's Girls	Aussie Child × *tetragonum*	Avril Hill (Ray Hill)
Redley	Gwenda Joy × Crimson Pride	R. McVeigh
Troppo's Dream	Ellen × Nunkumbil	J. Mewburn
Troppo's Splendour	Carawah × Pinterry	J. Mewburn
Troppo's Surprise	Schulan × *canaliculatum*	J. Mewburn
Visheen	Aussie Victory × Dot Sheen	N. Mitchell
Warreen	Warrior × Dot Sheen	N. Mitchell
DISA		
Chester Williams	Unifoam × Diores	S. & M. Cywes
Fransie	Diores × Tridior	H. Koopowitz
Irene Cywes	David vander Merwe × Riëtte	S. & M. Cywes
Mara Ferreira	Betty's Bay × Sister Henrietta Stockdale	S. & M. Cywes
Prilli Stevens	Marlene Cywes × Unikewbett	S. & M. Cywes
DORITAENOPSIS		
Ala Mode	*Phal.* Mildred Karleen × *Dtps.* Jason Beard	Lines (O/U)
Bavarian Orange Lip	*Dtps.* Fargo × *Phal.* Clown Festival	W. H. Kaiser
Ben Trail	*Dtps.* Coral Gleam × *Phal.* Double Rose	B. Woodson
Charlotte Pierce	*Phal.* Georges Seurat × *Dtps.* Speckled Thespian	Zuma Canyon (J. Rusk)
Gold Whistle	*Phal.* Goldberry × *Dtps.* Whistling Swan	W. Bohne
Malibu Gorge	*Dtps.* Zuma Charmer × *Phal.* Double Delight	Zuma Canyon
Malibu Lagoon	*Phal.* Carmela's Pixie × *Dtps.* Navarre Gem	Zuma Canyon
Malibu Valentine	*Phal.* Hisa Lady Rose × *Dtps.* Happy Valentine	Zuma Canyon
Memoria Ruth Cyba	*Phal.* Schlesien × *Dtps.* Orglade's Puff	W. Bohne
Merriman's Promise	*Phal.* Merriman's Desire × *Dtps.* Gerona	Allen Merriman
Miva Loch	*Phal.* Golden Horizon × *Dtps.* Marta De Rivilla	Michel Vacherot
Mivamac	*Dtps.* Orglade's Tartan × *Phal.* Mivac Carissimo	Michel Vacherot
Morning Fog	*Phal.* Art Miller × *Dtps.* Orglade's Space Base	Lines (O/U)
New Pisgah	*Phal.* New Glad × *Dtps.* Pisgah Wonder	Looking Glass
Ohl Dreams	*Dtps.* Coral Gleam × *Dtps.* Double Trouble	H. Ohl
Ohl Lady Luck	*Dtps.* Coral Gleam × *Phal.* Flaming Buddha	H. Ohl
Pisgah Indian	*Phal.* Green Mist × *Dtps.* Margery Adams	Owens Orchids
Signal's Snow	*Phal.* Jimmy Hall × *Dtps.* Orglade's Space Base	Lines (O/U)
Speckled Thespian	*Phal.* Speckled Treasure × *Dtps.* Orglade's Thespian	Zuma Canyon (O/U)
Summer Fest	*Dtps.* Pretty Nice × *Phal.* Lippetor	Sky Island
Zuma Centrum	*Phal.* Tapestry Rose × *Dtps.* Amour Rojo	Zuma Canyon
Zuma Country	*Dtps.* Orglade's Tartan × *Dtps.* Orglade's Thespian	Zuma Canyon
Zuma Gypsy	*Phal.* Gallant Beau × *Dtps.* Mexicana	Zuma Canyon
Zuma Highness	*Dtps.* Spuyten Duyvil × *Phal. venosa*	Zuma Canyon
Zuma Kismet	*Dtps.* Del Dios × *Dtps.* Yuri	Zuma Canyon
Zuma Lustre	*Dtps.* Spuyten Duyvil × *Dtps.* Marta De Rivilla	Zuma Canyon
EPICATTLEYA		
Cochlimax	*Epi. cochleatum* × *C. maxima*	K. Dreithaler
**GRAMMATOHEADIA (Grda.)*		
Boynton Leopard	*Gram. elegans* × ‡ *Brom. finlaysoniana* †	Alberts/Merkel
Gulfstream Leopard	*Grda.* Boynton Leopard × *Gram. scriptum*	Alberts/Merkel
HASEGAWAARA		
Miva Lafayette	*Ctna.* Orglade's Little Lover × *Pot.* Orglade's Tradition	Michel Vacherot
HAWKINSARA		
Dash of Napalm	*Ctna.* Why Not × *Slc.* Napalm	D. Neuendorff
KEFERANTHES		
Old Velvet	*Cnths.* Overbrook × *Kefst. tolimensis*	J. Hermans
LAELIOCATONIA		
Britt Porter	*Bro. negrilensis* × *Lc.* Little Susie	Claude Hamilton (B. Porter)
Claudia Hamilton	*Bro.* Seagulls Jamaica × *Lc.* Spring Imp	Claude Hamilton
Happy Face	*Lctna.* Peggy San × *Lc.* Mari's Song	D. Pulley
Super Salsa	*Lc.* Hot Sauce × *Ctna.* Why Not	F. Clarke
LAELIOCATTLEYA		
April's Clown	*Lc.* Puppy Love × *Lc.* Colorama	R. Ferguson
California Dreaming	*Lc.* Sandra Odebrecht × *Lc.* Californian Beauty	R. B. Cooke (R. Altenburg)

NAME	PARENTAGE	REGISTERED BY
LAELIOCATTLEYA continued		
Castle Carnival	*Lc.* Floralia's Carnival × *Lc.* Gold Digger	R. B. Cooke
Fredy Leroux	*Lc.* Elinor × *L. harpophylla*	Marcel Lecoufle
Hamlyn's Yallahs Gold	*Lc.* Gold Digger × *Lc.* Brenda Muse	Claude Hamilton
Memoria Dutch Fischer	*Lc.* Issy × *Lc.* Pirate King	R. Ferguson
Memoria Martha Deacon	*Lc.* Anne Walker × *C. granulosa*	K. Barth (O/U)
Miva Remi	*Lc.* Miva Sombra × *Lc.* Miva Reine	Michel Vacherot
Miva Trick	*Lc.* Chit Chat × *L. cinnabarina*	Michel Vacherot
Mother Cynthia	*Lc.* Cynthia × *C.* Mother Dominican	R. B. Cooke (R. Altenburg)
Rosie's Surprise	*Lc.* Irene Finney × *C. walkeriana*	ABC Orchids (Orchid Center)
Sansy Kestler	*L. anceps* × *C.* Elizabeth Mahon	R. Stanton
Violine	*Lc.* Joseph Hampton × *Lc.* Red Empress	Marcel Lecoufle
MASDEVALLIA		
Coquette	Harlequin × Minaret	Chieri Orchids (P. Pettit)
Harold Ripley	Marguerite × Monarch	Highland Trop.
Karen Muir	Angel Frost × Heathii	Highland Trop.
Keiko Komoda	Copper Angel × *constricta* ¶	I. Komoda
MILTASSIA		
Iscream	*Brs. brachiata* × *Milt.* Moirmoir	W. J. Harper (Sherlocks)
MILTONIA		
Barney Carlson	Soquel × Jean Carlson	E. Carlson
Chieri Kabuki	Auburn Spring × Manitou Falls	Chieri Orchids (P. Pettit)
Jack Pass	Bellingham × Mount Rainier	Baker & Chantry
Makawao Red	Hurricane Ridge × Hamburg	I. Komoda
Patricia Anne	Anamaria Baptista × Red Knight	Kay Rinaman (Orchid House)
Ravenna	Ivory Belle × Seattle Opera	Baker & Chantry
Rose Raven	Beall's Strawberry Joy × Meadowdale	Chieri Orchids (P. Pettit)
Supernova	Dan Harvey × Zorro	Chieri Orchids (P. Pettit)
NAKAMOTOARA		
Selsal's Baby Blue	*Neof. falcata* × *Ascda.* Blue Eyes	J. & I. Selles
ODONTIODA		
Badger Pass	*Oda.* Lippstadt × *Odm.* Mount Diablo	Sunset
Bobo	*Oda.* Boganna × *Oda.* Bogotá	Sunset
Chantos Butter	*Oda.* Chantos × *Odm.* Buttercrisp	J. L. Walker (O/U)
Doctor Joe Walker	*Oda.* Queen of Hearts × *Oda.* Chantos Butter	J. L. Walker (O/U)
Dugger's Ruby	*Oda.* Red Rum × *Oda.* Marzorka	Orchids Ltd [MN] (R. Dugger)
Dugger's Tapestry	*Oda.* Joe's Drum × *Oda.* Salway	Sunset (R. Dugger)
Electric Ladyland	*Odm. rossii* × *Oda.* Dugger's Ruby	Orchids Ltd [MN]
Inspiration Point	*Oda.* Golden Dawn × *Oda.* Bo's Gold	Sunset
Mirror Lake	*Odm.* Perolia × *Oda.* Bogotá	Sunset
Mount Starr King	*Oda.* Saint Clement × *Oda.* Solana Carousel	Sunset
Red Ripple	*Oda.* Fresnillo × *Oda.* Saint Clement	Sunset
Redwood	*Oda.* Lippestern × *Oda.* Jan's Pride	Sunset
San Damiano	*Oda.* Wearside Galaxy × *Odm. crispum*	J. L. Walker (O/U)
Solana Remembrance	*Oda.* Chanticleer × *Oda.* Uxmal	Sunset (R. Dugger)
ODONTOCIDIUM		
Joseph Woolf	*Odm.* Stamfordiense × *Onc.* Yurla	Florafest
ODONTOGLOSSUM		
Dugger's Gold	Stonehurst Yellow × Moselle	Sunset (R. Dugger)
Strosuit	Stropheon × Durham Pursuit	Sunset
ONCIDETTIA		
Heartthrob	*Onc.* Mary Alice Smith × *Comp. speciosa*	W. Savage (Richella)
ONCIDIUM		
Béguine	Prélude × *bifolium*	Marcel Lecoufle
Bisar	*sarcodes* × *bifolium*	Marcel Lecoufle
Comptine	*bifolium* × *concolor*	Marcel Lecoufle
Coucou	*tigrinum* × Bijou	Marcel Lecoufle
Fanfreluche	Caledonia × Sweetheart	Marcel Lecoufle
Hamlyn's Butterfly	Jungle Monarch × *guttatum*	Claude Hamilton
Honey Bee	Memoria Harold Starkey × *onustum*	D. Neuendorff
Lucid	Tender Love × *crispum*	W. Savage (Richella)
Maliwan	Vison × Golden Sunset	T. Orchids
Radiant	Magic × First Love	W. Savage (Richella)
Rimini	Bijou × Sultamyre	Marcel Lecoufle
Spiffy	Bubbles × Angelique	Richella
Talisman	Golden Sunset × Stunner	W. Savage (Richella)

NAME	PARENTAGE	REGISTERED BY
ONCIDIUM continued		
Tourbillon	Bijou × Joyeux	Marcel Lecoufle
Treasure	Bloody Mary × Batik	W. Savage (Richella)
Valse	*crispum* × *bifolium*	Marcel Lecoufle
OSMENTARA		
Elizabeth Hamilton	*Lpna.* Kingston × *Ctna.* Maui Maid	Claude Hamilton
OTAARA		
Hamlyn's Manchester	*Ctna.* Orglade's Little Lover × *Otr.* Krull-Smith	Claude Hamilton
PAPHIOPEDILUM		
Addicted Susan	Susan Booth × *adductum*	F. Booth
Aprostede	Apropo × Greenstede	T. Kurosawa (M. Yamazaki)
Baroness	Tangold × Highland Globe	J. McCubbin (R. Deane)
Carrie Sloane	Love Song × *violascens*	A. Mochizuki
Charles Salzman	Great Pacific × Sheila Hanes	A. Salzman
Charlotte Gillis	Lemförde Surprise × *fairrieanum*	A. Mochizuki
Chicago	Ernest Read × *sukhakulii*	A. Mochizuki
Comman's Arrow	Amanda's Arrow × Commando	K. Ohta
Deladu	*adductum* × *delenatii*	R. & L. Wellenstein (A. Wm. Smith)
Digital Doll	Fred Cosanka × Woodruff	H. Doll
Dollaktion	Winston Churchill × Sunol	H. Doll
Doll Fashion	Memoria Jack Dixon × World Frolic	H. Doll
Dollina	*primulinum* × *callosum*	H. Doll
Doll's Studio	Dixon Gold × World Express	H. Doll
Doll's Wellnes	World Venture × Fred Cosanka	H. Doll
Dollviran	Sharnden × World Cup	H. Doll
Ella May	Love Song × *sukhakulii*	A. Mochizuki
Frankmoore	Frank Pearce × Farnmoore	Suwada Orch.
Frohdoll	World Frolic × Sunol	H. Doll
Global Passport	Glenalla × Highland Globe	J. McCubbin (R. Deane)
Gothic Garden	Goultenianum × Holdenii	Mukoyama (N. Zurcher)
Helen Booth	Helvetia × *rothschildianum*	F. Booth
Highland Globe	Avine × Green Globe	J. McCubbin (O/U)
Isabel Adjani	Utgard × *henryanum*	A. Mochizuki
Jacaranda Doll	Memoria Jack Dixon × Jamboree	H. Doll
Jiminy Cricket	Utgard × *primulinum*	A. Mochizuki
King Fisher	Io × Maudiae	A. Mochizuki
Lakewood	Curb Setter × William Matthews	A. Mochizuki
Morton Booth	Mount Toro × Predacious	F. Booth
Nivesque Satin	*niveum* × *hirsutissimum*	L. Wish (Joe Kunisch)
Norbert Singer	*spicerianum* × Green Marsh	Brenda Walter (O/U)
Northville Pride	Robinella × Winston Churchill	F. Dobell
Opera Hat	Curb Setter × *mastersianum*	A. Mochizuki
Oriental Callos	Oriental Frieze × *callosum*	A. Mochizuki
Paige Amorteguy	*liemianum* × *charlesworthii*	A. Amorteguy (R. J. Rands)
Penfield Dragon	*ciliolare* × *lowii*	A. Salzman
Phillip Booth	Phillip Ruggiero × Susan Booth	F. Booth
Rachel Lynde	*argus* × William Mathews	A. Mochizuki
Red Saint	Red Lawren × Saint Swithin	A. Mochizuki
Rex Harrison	Utgard × Susan Booth	A. Mochizuki
Rosemead	*sukhakulii* × *dayanum*	A. Mochizuki
Rotwein	Telesis × My Daughter	H. Doll
Saint Rainerius	Saint Swithin × Raisin Jack	F. Booth
Saint Romulus	Saint Swithin × Gary Romagna	F. Booth
Sam Boulter	Makuli × *bullenianum*	A. Mochizuki
Star Blazer	*sukhakulii* × Nettie McNay	A. Mochizuki
Sugar Ray	Yachiyo Spring × *lawrenceanum*	A. Mochizuki
Sun Devil	Via Quatal × *mastersianum*	A. Mochizuki
Symbol Doll	Dixon Gold × World Exploit	H. Doll
Tempest	Balaclava × Sheila Hanes	M. Salzman
Urban Goul	*urbanianum* × Goultenianum	A. Mochizuki
Verity Doll	Estée × Pauline Cosanka	H. Doll
Waikiki Princess	*philippinense* × Blanchette	C. McAllister (N. Powell)
Wössner Godeem	*godefroyae* × *emersonii*	F. Glanz
Wössner Philimal	*philippinense* × *malipoense*	F. Glanz
**PEPEARA (Ppa.)*		
Enzomondo Rosina	*Rnctm.* Yap Sin Yee × *Dtps.* Rosina Pepe	Enzomondo
PHALAENOPSIS		
Adalbert's Dream	Morgenrot × Ida Fukumura	W. Bohne
Ambo Happiness	Ambo Harvest × Zuma Happiness	Sky Island
Ambomidas	Ambotrana × Midas Touch	J. & I. Selles (O/U)

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Barbarella	Ida Ong × Hugo Freed	Lowland-Biotech
Buddha's Happiness	Buddha's Gift × Zuma Happiness	Sky Island
Buddha's Harvest	Buddha's Gift × Ambo Harvest	Sky Island
Calibra	Spitzberg × Ida Ong	Lowland-Biotech
Carmen Stephenson	Habsburg × Poco's Rosado	Claude Hamilton
Charlotte's Happiness	Lady Charlotte × Zuma Happiness	Sky Island
Cinnamon Harvest	Ambo Harvest × Smooth Smooch	Sky Island
Coaster	Fran-Shen × Buckeye	Sky Island
Cornigia Tudor	*corningiana* × Elizabeth Tudor	Sky Island
Country Lights	Country Charm × Bright Lights	Lines (O/U)
Crossroads	Ventura × Lowland Wizard	Lowland-Biotech
Dame Phyllis Fallows	Flor de Niebla × Ellen Letcher	Mrs C. Coll
Dream Catcher	Indian Princess × George Vasquez	W. Bohne
Ellen Letcher	Samson × Lipperose	Mrs C. Coll (E. Letcher)
Ewing's Treasure	Cherry Dawn × Double Rose	W. Bohne (J. Ewing)
Fairy Dust	Gladys Hager × Double Delight	L. Plank (Carmela)
Fire and Pearl	Dorothy's Pearls × Collette Lee Carpenter	Sky Island
Hamlyn's Fairy	Fairy Charm × Hausermann's Candy	Claude Hamilton
Hamlyn's Mini Candy	Hausermann's Candy × Pink Minuet	Claude Hamilton
Indian Treasure	Indian Princess × Malibu Imp	W. Bohne
Jade Eagle	Golden Eagle × Jade	W. Bohne
Java Lava	Mickey's Java × Paul Tatar	Sky Island
Just Right	Carmela's Spots × Zuma Rascal	Sky Island
Ken's Greencote Orange	Scott Eugene × Orange Moon	S. Pridgen
Larry Tudor	Larry Suzuki × Elizabeth Tudor	Sky Island
Leonard Bernstein	Ambonosa × Princess Kaiulani	B. Woodson
Lowland Lipstick	Arthur Freed × Lowland Wizard	Lowland-Biotech
Luke Giatgong	Giatgong × Bangkok Beauty	T. Orchids
Malibu Harbinger	Angel White × *venosa*	Zuma Canyon
Malibu Hauteur	Mount Dora × Carmel Valley	Zuma Canyon
Malibu Heart	Glad Heart × *equestris*	Zuma Canyon
Malibu Jewel	Luxor × Nancy Reagan	Zuma Canyon
Marabaine	Maraldee × Aubaine	Sky Island
Marica	Bill Freeman × Auspice Center	Sky Island
Memoria Martha Bohne	Red Devil × Ida Fukumura	W. Bohne
Miva Bacata	Cataracte × Miva Barbara	Michel Vacherot
Miva Baccarat	Golden Horizon × Miva Cristal	Michel Vacherot
Miva Carro	Arromanches × Mivac Carissimo	Michel Vacherot
Miva Frejus	Miva Polka × Miva Dolcissimo	Michel Vacherot
Miva Granny	Golden Horizon × Golden Buddha	Michel Vacherot
Mivakay	Golden Horizon × Wilma Hughes	Michel Vacherot
Miva Kitsch	Golden Horizon × Kyrielle	Michel Vacherot
Mivalpes	Mivaplagne × Fifi	Michel Vacherot
Miva Meli-Melo	Miva Mage × Comédie	Michel Vacherot
Mivapelvoux	Spitzberg × Wilma Hughes	Michel Vacherot
Miva Savoie	Wilma Hughes × Tarragone	Michel Vacherot
Miva Spottissimo	Mivac Carissimo × Mivac Dottissimo	Michel Vacherot
Miva Zazou	Mivac Caresse × Mivafort	Michel Vacherot
Mountain Magic	Joseph Hampton × Illini Star	Lines
Ohl Frosty	Zada Martian × Flaming Buddha	H. Ohl
Ohl Lazy Days	Wescovina Buddha × Corning-Ambo	H. Ohl
Ohl Spots	Penang × Double Delight	H. Ohl
Ohl Tunes	Meller Gold × *stuartiana*	H. Ohl
Ohl Wow	Howard's Surprise × Ida Fukumura	H. Ohl
Oregon Bells	Shirley Pendelton × *celebensis*	Sky Island
Oregon Celebration	Katie Baldwin × Oregon Delight	Sky Island
Oregon Sands	Golden Sands × French Delight	Sky Island
Oregon Sunset	Arizona Sunset × Auspice Center	Sky Island
Our Favorite Spot	Bright Spot × Orglade's Hot Spot	Lines (O/U)
Pisgah Bambo	Sambambo × Angel White	Owens Orchids
Prairie Lights	Prairie Du Sac × Bright Lights	Lines (O/U)
Preamble	Gold Prima × *amboinensis*	Owens Orchids (R. Takase)
Reapin' Leopards	Ambo Harvest × Ho's Fancy Leopard	Sky Island
Regine et Frantz	Mivacap × Mivac Carissimo	Michel Vacherot
Roussimo de Miva	Rousserole × Mivac Dottissimo	Michel Vacherot
Safrané	Mambo × Champs Elysées	Marcel Lecoufle
Sakura Komachi	Baby Star × Rapture	E. Koga
Selsal's Arrakis	Misty Green × Golden Gift	J. & I. Selles
Selsal's Banana Freeze	Henry Rothman × Maraldee	J. & I. Selles
Selsal's Flash Gordon	Francis Melendez × Bamboo Baby	J. & I. Selles
Serene Perfection	Givre × Serene Anna	Alberts/Merkel
Sheila McDaniel	Hausermann's Candy × Be Glad	Brennan's (D. McDaniel)
Shenandoah Blush	Snow Eagle × Orglade's Hot Spot	Brennan's
Show Lights	Show Girl × Bright Lights	Lines (O/U)

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Signal's Star	Illini Star × Peter Ciula	Lines
Smooth Smooch	Mouchette × Smooth As Silk	Sky Island (O/U)
Southern Belle	Shanghai Breeze × Jerry Host	Lines
Speckled Snow	Petite Snow × *lueddemanniana*	Sky Island
Stone Cool	Fortune Buddha × Prinsana	Chen Gee-En
Striped Delight	Fifth Avenue × Soroa Delight	Orchid Plantation (O/U)
Stripes and More	Fantastic Stripe × Carmela's Stripe	K. Niemann (O/U)
Ted Scott	Yolande Scott × Georges Seurat	R. Quick (Y. Scott)
Tudor Jewels	Lipanda Jewel × Elizabeth Tudor	Sky Island
Uh-Oh	Spirit House × Deventeriana	Sky Island
Ventura	Intermedia × Hugo Freed	Lowland-Biotech
Violet Ruler	*violacea* × Hakalau Ruler	Sky Island
Zuma Beau	Mount Dora × Gallant Beau	Zuma Canyon
Zuma Camreal	Via Camino Real × *amabilis*	Zuma Canyon
Zuma Captain	Toyland × *stuartiana*	Zuma Canyon
Zuma Flash	Miniflash × Zuma's Pixie	Zuma Canyon
Zuma Interlude	Poco's Rosado × Micha's Child	Zuma Canyon
Zuma Keystone	Susan Harry × *venosa*	Zuma Canyon
Zuma Melinda	Poco's Spotted Imp × Glad Melinda	Zuma Canyon
PHRAGMIPEDIUM		
Paul Eugene Conroy	*wallisii* × *longifolium*	Harbinger (O/U)
POTINARA		
April Lee's Crimson	*Pot.* Gordon Siu × *Blc.* Memoria Helen Brown	R. Ferguson
Cardinal's Coat	*Pot.* Suzanne Glenn × *Slc.* Brandywine	Lines
Castle Bay	*Blc.* Norman's Bay × *Pot.* Hugo Porto	R. B. Cooke
Harold Levenson	*Pot.* Red Lava × *L. anceps*	P. Salzman
High Hopes	*Lc.* Alfredo Martinelli × *Pot.* Hugo Porto	R. B. Cooke (E. Porto)
Love-Love	*Pot.* Love Passion × *Blc.* Love Sound	Dogashima
Memoria Ian McConnell	*Lc.* Royal Emperor × *Pot.* Fortune Teller	Claude Hamilton
Perfect Choice	*Pot.* Tokyo Bay × *Lc.* Lake Casitas	Suwada Orch.
Poppie's Princess Alice	*Blc.* Bouton D'Or × *Slc.* Pixie Pearls	B. N. Jones
Warren's Requiem	*Blc.* Waikiki Sunset × *Pot.* Bunty	B. N. Jones
RHYNCHOCENTRUM		
Thailand Gold	*Rhy. coelestis* × *Asctm.* Mee	T. Orchids
RHYNCHOSTYLIS		
Hirota	Chorchalood × *retusa*	T. Orchids (S. Srisuk)
ROLFEARA		
Etoile D'Or	*Sc.* Beaufort × *B. perrinii*	Marcel Lecoufle
RONNYARA		
Luke Pla	*Vasco.* Charles Marden Fitch × *Prra.* Luke Thai	R. Viraphandhu
SCHOMBOCATTLEYA		
Memoria Earl Blanford	*C. aurantiaca* × *Schom. crispa*	S. Benjamin (A. Klehm)
SHIVEARA		
Dennis Kleinbach	*Wgfa.* Browning Island × *Onc. crispum*	Baker & Chantry
SOPHROCATTLEYA		
Mutine	*C.* Jungle Cat × *Sc.* Seagulls Beaulu Queen	Marcel Lecoufle
Pisgah Rusty	*Sc.* Batemanniana × *C. aclandiae*	Owens Orchids
SOPHROLAELIA		
Wössner Sternchen	*Sl.* Psyche × *L. bradei*	F. Glanz
SOPHROLAELIOCATTLEYA		
Alix Chatel	*C.* Chocolate Drop × *Slc.* Toison D'Or	Marcel Lecoufle
Coral Gem	*Lc.* Orange Gem × *Slc.* Coral Queen	R. B. Cooke (R. Altenburg)
Endless Love	*Lc.* Tokyo Magic × *Slc.* Jeweler's Art	Dogashima
Golden Treat	*Lc.* Trick or Treat × *Slc.* Golden Wax	F. Clarke
Jam Session	*Sl.* Red Doll × *C. schilleriana*	Mrs R. Levy
Little Napalm	*Slc.* Napalm × *Slc.* Little Hazel	D. Neuendorff
Ron Hubbard	*Slc.* Paprika × *Slc.* Rimfire	Saint Hill Manor
Sunstate Ruby	*Lc.* Fires of Spring × *Slc.* Jewel Box	B. N. Jones
Valerie Della Brown	*Slc.* Pink Doll × *Soph. coccinea*	B. Gerhard (J. Woltmon)
Wössner Minihazel	*L. bradei* × *Slc.* Hazel Boyd	F. Glanz
**SRISUKARA (Srka.)*		
Srisuk Beauty	*Cleis. chantaburiense* † × *Rhctm.* Ladda Gold	S. Srisuk

NAME	PARENTAGE	REGISTERED BY
STANHOPEA		
Graham Willmore	Assidensis × *florida*	Baker & Chantry
TRICHOGLOTTIS		
John Ward	*cirrhifera* † × *tomentosa* †	E. Christenson
VANDA		
Ann Sumida	Reverend Masao Yamada × Chavananand	T. Sumida (H. Nishiguchi)
Glaxo Wellcome	Intan × Faye Bennett	Hew Nursery (Rama)
Noriko Sumida	Woodlawn Glory × Teoh Chee Keat	T. Sumida (W. K. Nakamoto)
Pakchong Blue	Doctor Anek × *coerulea*	P. Kran Som Prot
Perempuan Sri Aman	Intan × Ponpimol	Hew Nursery (Rama)
Ted Sumida	Noriko Sumida × Nancy Rodillas	T. Sumida
VASCOSTYLIS		
Five Friendships Fortune	*V.* Rasri Gold × *Vasco.* Nong Kham	Five Friendships
South East Pearl	*Vasco.* Seng × *V.* Mevr. L. Velthuis	S. E. Orchids
WILSONARA		
France de Valec	*Oda.* Picador × *Wils.* Granados	Vach. & Lec.

*New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Grammatoheadia = *Bromheadia* Lindley × *Grammatophyllum* Blume
Pepeara (named in honour of Maria Rosina Pepe of Italy) = *Ascocentrum* Schlechter × *Doritis* Lindley × *Phalaenopsis* Blume × *Renanthera* Loureiro
Srisukara (named in honour of Mr Suchat Srisuk of Thailand) = *Ascocentrum* Schlechter × *Cleisostoma* Blume × *Rhynchostylis* Blume

‡ Natural genus new to registration: *Bromheadia* Lindley

§ This is the first application to register an artificial raising, as a grex, of the following natural hybrids: *Dact.* × *aschersoniana, Dact.* × *latirella, Dact.* × *wintoni*

† Species appearing for the first time as parents in registration:
Bromheadia finlaysoniana, Bulbophyllum psittacoglossum, Cleisostoma chantaburiense, Dactylorhiza incarnata, Trichoglottis cirrhifera, Trichoglottis tomentosa

¶ Species name new to registration: *Masdevallia constricta* (*syn. urosalpinx*)

GENERAL CORRECTION
Masdevallia constricta is now the accepted name for *Masd. urosalpinx.* All past registrations have been corrected.

CORRIGENDA – Orchid Review list of:
May/June 1993, Species appearing for the first time in registration: add *Dendrobium platygastrium, Dendrobium epidendroides* (both parents of *Den.* Siesta Showers)
May/June 1994, *Paph.* Gérald Joly: pollen parent should read Madame Martinet
May/June 1994, *Paph.* Hans Koch: pollen parent should read *sanderianum*
May/June 1994, *Phal.* Carolina Scarlet Spica: pollen parent should read Carolina Red Spica
May/June 1994, *Phal.* Mothers Delight: pollen parent should read Shigeharu Fujii
May/June 1994, *Pot.* Miracle Kotan: registrant should read Yuhora
May/June 1994, *Yap.* Sean: pollen parent should read Sri-Siam
July/August 1994, *C.* Shady Lady: seed parent should read Guatemalensis
May/June 1995, *Paph.* Venustrick: should read Venus Trick

CORRIGENDA – Sander's List of Orchid Hybrids 1986-1990
p. lxviii Merriman: delete entry and insert Merriman, Allen . . . Allen Lee Merriman RR2 Box 94 600E, Franklin, Indiana, IN 46131, USA
p.18 *Ascda.* Queen Florist: registrant should read P. Rakpaibulsombat
p. 586 *Phal.* Howard's Buddha: registrant should read Ohl
p. 586 *Phal.* How Close: registrant should read Stewart Orch.
p. 621 *Phal.* Merriman's Desire: registrant should read Allen Merriman

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Sterilisation of Orchid Seed Coat

by R Smythe MSc

In this work several different sterilising agents have been tested and compared. The primary objectives of the study was to find out.

(1) How long it was necessary to soak the seed to completely sterilise the coat.

(2) How long the seeds could be soaked without completely killing the seed.

This information is needed by flaskers in order not to lose valuable seed by over or under sterilisation. Though the study only involves *Phalaenopsis* seed the flaskers could make an intelligent estimate of treatment times for smaller and larger seed.

STERILISING AGENTS

The four sterilising agents used were:—

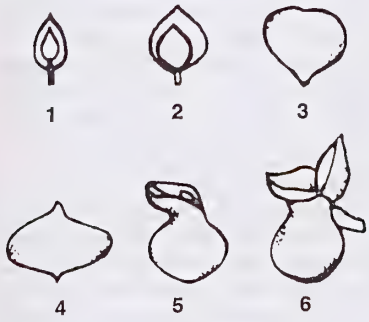
Bleach diluted to 0.4% w/v available chlorine (white magic brand diluted one to ten).

Alginox 1.0% w/v (dilute 10 ml of Alginox to 1 litre)

Peroxide 0.3% w/v

Potassium Iodide 0.001% w/v saturated with iodine.

Stages of Germination[1]



Stage 1 seed
Stage 2 swollen seed
Stage 3 Green protocorm
Stage 4 Green tip forming first leaf
Stage 5 Second Leaf
Stage 6 First true root.

Seed storage

I have found that the sown media could be stored in a darkened cupboard for up to two months. When they were brought out into the light they went green in days. Another way found was to store the seed in sterile water at room temperature. I have found the seed of *P.* Malibu Imp remained viable by this method for at least 5 months. This latter method for collecting seed is a very convenient method if you are to make many flasks over a period of time.

The seed used in this study were all dry seed taken from various phalaenopsis species. The seeds were desiccated over silica gel and stored under refrigeration immediately after removal from the pod. The ages of the seed were up to 13 months old. All seed types had some viable seed. The percentage of viable seed was not determined. From previous work it was known that the viability of *P. philippinensis* was very high while *P. venosa* was very low. Successful germination was registered if any green protocorms were produced. Evaluations of the relative merits can be judged from the *P. philippinensis* study due to a viability approaching 100%. For the work reported here subdued light was used.

METHOD

All seed was soaked overnight in distilled water. Anything floating next day was discarded. The excess water removed and replaced by the sterilising agent (15 ml). This was intermittently shaken and the time in contact with the reagent recorded. A sterile dropper was then used to remove the settled seed. A drop of this was then carefully placed on to the top of the sterile water 15 ml. The seed slowly sank to the bottom and was collected with a minimum of disturbance of the water. One half of a millilitre of this seed bearing solution was placed in a 70 ml flask containing 20 ml of the sterile media. Contact times with the sterilising agent ranged up to 3 hours and forty one minutes. The study was monitored for forty days.

MEDIUM

The medium used for germination studies was Vacin and Went[2] (as per Sigma catalogue[3] V5505) with trace elements as per Knudson[4]. In one litre of this 70 ml of diluted coconut water 6g agar and 4g of sugar were used with the media then being sterilised at 125 C for 15 min using an autoclave. The diluted coconut water was prepared by diluting the contents of a 400 ml can of this material to one litre, storing it in the fridge until the water layer settles and the oil and pulp layer surfaced. The clear lower layer was used in the medium. Home Brand coconut cream packed by Grocery Wholesalers. Yennora, N.S.W. was used.

RESULTS

The five species *P. schilleriana, philippinensis, venosa, cornu-cervi rosenstromii* were tested for germination. *P. lueddemanniana* was used for a follow up experiment.

Bleach:—

(contact time from 9 min up to 41 min)

At 0.4% w/v all the species other than *P. rosenstromii* germinated after nine minutes of contact. Only one species *(P. philippinensis)* survived twenty eight minutes and none germinated after forty-one minutes. After a contact of nine minutes no flasks were infested with fungi or bacteria.

Peroxide:—
(contact time from 46 min up to 3Hr 39min.)

At 0.3% w/v it was found that where this worked it worked very well with the protocorm forming and greening quickly. *P. philippinensis* and *P. cornu-cervi* germinated even up to the longest time. *P. rosenstromii* only germinated once during all the tests reported here and that was after three hours and thirty-nine minutes in the peroxide. Lesser times gave sterile flasks but no germination. The problem with this reagent is that sterility was not predictable.

Using twice the peroxide concentration (0.6%w/v) and with the addition of vacuum cycling. *P. lueddermanniana* seed gave some erratic successes with some longer contact times showing infestation while others of shorter times were infestation free. Using 6.0%w/v good results were observed after 5 minutes while at 40



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min of contact time all the seeds were dead.

Potassium Iodide/Iodine:—
(contact time 2min to 40min)

Worked best for *P. schilleriana* with germination occurring up to and including forty minutes. This was the longest time tested for this reagent. *P. philippinensis* stopped germinating after 2 minutes of exposure. All media remained non infested.

Alginox:—

Nothing germinated and 10% of the flasks became infested.

Comparisons:—

The sterilising agents performed differently from seed to seed. *P. philippinensis* and P. *schilleriana* seeds were both 3 months old and approaching 100% viability so here some comparisons can be made. The following comparisons for these two species are given.

With bleach at 0.4% w/v available chlorine, *P. schilleriana* performed well with 50% germination and reaching stage 3 after 40 days. First germinations were observed after 26 days. The maximum contact time used for successful germination was 19 minutes. The protocorms were not as green as for the peroxide treated seed.

P. philippinensis took the same time to show germination but the strike rate was poor (1%) after 40 days. With peroxide 0.3% w/v *P. philippinensis* germinated extremely well with germination in all the flasks being obvious after 17 days and showing a 50 to 90% germination rate after 40 days. The protocorms were bright green and had progressed to stage four. With *P. schilleriana* all solutions became infested using this strength of peroxide.

Conclusions

With *Phalaenopsis* seed the most reliable method would be to use bleach for nine minutes. You would always see some strike except for *P. rosenstromii*. If your seed was out of a freshly burst pod you may do better with the milder peroxide 0.3% w/v for up to three hours. Bleach and peroxide both give quite fast results. The Potassium Iodide/Iodine method gives much slower germination. I believe this to be due to the seed coat actually concentrating this reagent as the coat becomes strongly coloured and this may have to leach out before the seed will germinate. the big plus for this reagent is it kills all the bugs and has a colour which allows you to see it is OK. Even if you leave the lid off and lose iodine, once you put it back on more solid iodine will dissolve. (You can't say the same for bleach or peroxide). A lot of this seed is swollen but not yet green. It is such a good sterilising agent, but the poor germination suggests it would be worth trying at one tenth of the strength used here. Alginox was a complete failure. On the negative side dilute peroxide is unreliable as it forms oxygen bubbles which can protect spores from the reagent. On the positive side, if you successfully sterilise the coat the excess oxygen produced by the decomposition of the peroxide could enhance the germination[5]. You have to be continually tapping the vessel to release these bubbles. Even vacuum cycling to burst the bubbles did not work reliably well. Using the 6% for a short time may be better than using the dilute peroxide as it appears from the limited study using only two species that the sterilisation is over before the bubbles form. It is interesting that *P. rosenstromii* only germinated after a long exposure to peroxide. I have always thought that the reason this species germinates so easily green pod but won't germinate in mass from dry seed was due to its forming a hard seed coat. Now I will have to think again as surely bleach and iodine would have done more damage to this coat than the peroxide would have.

To put it all in a nut shell, the best way to sterilise the seed of *Phalaenopsis* species is to soak the seed overnight and expose the seed to nine minutes of 0.4% w/v bleach and treat a second seed sample for five minutes with 6% w/v hydrogen peroxide. Rinse the seed with sterile distilled water.

References:—

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Lowland Orchids of Papua New Guinea

Peter O'Byrne
National Parks Board, Singapore Botanic Gardens,
Cluny Road, Singapore
584pp. 135 colour plates and line drawings
ISBN 981 00 60823
RRP. $A95 from Australian Orchid Foundation

The task of adequately describing and illustrating the orchids of the island of Papua New Guinea is one of the last great challenges of the world of orchid science. While taxonomists debate the intricacies of name changes and species concepts in Australia and other parts of the world, the orchids of New Guinea await the most basic cataloguing. The botanist is confronted with new species at every turn both in the highlands and lowlands. Peter O'Byrne estimates up to 3500 orchid species occur in Papua New Guinea, with about 1000 growing below 1000 metres altitude. In *Lowland Orchids of Papua New Guinea* he describes and illustrates 269 species in 55 genera, over one quarter of the lowland species.

This book is an important step to cataloguing the New Guinea orchids, but it is also an indication of the distance left to travel. Other important steps on this journey have been taken in recent times thanks to the work of Philip Cribb, Tom Reeve, Neville Howcroft, Jeffrey Woods and others with revisions of various sections of *Dendrobium* and other groups, accounts of New Guinea islands such as Bougainville and various miscellaneous papers. However to my knowledge no one or no institution is attempting or promoting a full taxonomic study of New Guinea orchids.

Some of the problems confronting the orchid scientist in New Guinea are summarised by the author of this book who estimates that 10-12% of the lowland orchids are undescribed and another 10-15% are species previously not recorded for New Guinea. In other words up to one quarter are currently unknown or unrecorded. One imagines the figure could be higher in the highlands. O'Byrne in this book does not attempt to scientifically name new species. Of the 269 species described, 70 are listed without a name. Perhaps this could be criticised, but the process of going through the formalities and of comparing thousands of specimens would have resulted in this book not being published for many years. Personally, I think his approach is correct and I hope the book is a catalyst for more complete taxonomic work. In the meantime we have the gold mine of information which this book supplies and we have a name of sorts to use until someone gets around to providing the taxonomically correct name.

Many of the well known and popular New Guinea orchids are illustrated in this book. Species illustrated include *Dendrobium johnsoniae, D. macrophyllum, D. gouldii, D. bracteosum, D. lawsii, Bulbophyllum fletcherianum, B. graceolens, Ascoglossum calopterum, Phalaenopsis amabilis, Vanda hindsii.* As well as these there is a multitude of lesser known species in genera such as *Diplocaulobium, Bulbophyllum, Cadetia,* and *Taeniophyllum.* Each species has a full page description which features information on distribution, habitat, altitude, flowering period, general and detailed description and notes on cultivation. Synonyms are listed and common names given where these exist. There is no reference to the date or place of publication of the name, information which is often omitted these days possibly to make books appear less daunting to the general public. However this is useful information which takes up very little space and I, for one, would like to see it included even in popular books particularly where they bring together all the orchids of a region.



The accompanying illustrations occupy most of the page opposite the descriptions. The illustrations are good botanical drawings of the whole plant and various flower parts. The captions are hand written or hand printed, but this seems to add to the charm of the drawings. The standard of the illustrations varies from excellent drawings to a few which are fairly rudimentary, but on the whole they are of more than adequate standard. In many cases the reproductions seem to be rather faint and this detracts from their appearance and may hinder use in some cases. The 135 colour pictures are grouped on 32 pages in the middle of the book. They are of excellent quality and add greatly to the book's appeal.

Other chapters cover geography, climate and vegetation of Papua New Guinea; collecting, conservation and cultivation; and classification. There are two Appendices — one listing locations mentioned in the text and the other listing catalogue numbers.

It is customary in a review such as this to catalogue the mistakes. These are relatively few in this case. One glaring error is to attribute the authorship of the genus *Dendrobium* to Sweet, where it should be to Swartz. However errors such as this are not common. I found the index puzzling. For example there are many entries under "D . . . ". These may be a *Dendrobium*, a *Diplocaulobium* or a *Dipodium* — there is no way of knowing. Bold face is used in the index with no indication of what it means. At least it is possible to find a species in the book by using the index, so it does serve its purpose.

The book is not cheap. At $95 it is perhaps too expensive to have a general appeal, but in its defence there is a great deal of information packed into the 584 pages and, for those with an interest in New Guinea orchids, it is essential reading. I believe the author and publishers are to be congratulated for this important contribution to our knowledge of the orchid flora of Papua New Guinea.

Bill Lavarack
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I believe "The Complete A-Z of Gardening in Australia" attempts to do what the title suggests and does a very good job. While no book this size could possibly provide all the details anyone could ever want, this publication does provide a good background to just about every topic I can

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think of which affects the average home garden. There is more than enough information to get a garden going and make it interesting in the process. For most suburban gardens there is probably enough information to plan and complete the whole garden without the need for other publications unless specialising is an objective.

The content of the book is as follows:

Planning Your Garden: Provides a background to points to consider including water, paths, fences, lights, pergolas, rockeries, terraces among others. There is a good background to garden design with many pitfalls discussed and good ideas provided.

Lawns: Preparation, planting, maintenance and grass types are covered.

Shrubs: A list of plants to provide a background or division within the garden.

Trees: Provide overhead shade and a frame for the garden small to very large are covered.

Hedges and Windbreaks: Necessary in many areas. A list for privacy or colour.

Water Gardens: Construction and a list of plants for in and around the pond.

Annuals: A list of plants to provide colour the year round.

Perennials: Plants to form the basis of most gardens with information on maintenance to retain usefulness.

Bulbs and Corms: A list of bulbs suitable for Australia with information on how frequently to lift and planting recommendations.

Ground Covers: For sun or shade. A large selection with a few surprises.

Climbers: The advantages of climbers and a range for all areas.

Conifers: With information on large to very small there is probably a conifer to suit just about every garden listed here.

Camellias: Have warranted a chapter of their own and some "other" species are also discussed.

Indoor and Patio Plants: A range of both foliage and flowering plants suitable for containers and indoors. Includes sections on ferns and orchids.

Cacti and Succulents: Includes propagation notes and covers the commonly grown plants.

Cycads: I was surprised and pleased to see this very short chapter.

Palms: A list of palms suitable for temperate as well as tropical areas. Includes large and small plants.

The Kitchen Garden: Covers herbs, vegetables and fruit both temperate and tropical.

Garden Maintenance: Includes commonly found pests and weeds and their control, soil improvement, propagation and a good section on pruning.

Plants for Special Purposes: Tables of plants for given conditions.

With sections such as these there are obviously some overlaps so some plants have descriptions in more than one section. My only complaint is that there is no cross reference between sections (i.e. see also page such and such with each entry) other than multiple page numbers in the indexes. And there are two indexes — plant and a general — which can be a bit of a nuisance if you end up looking in the wrong one.

The plants are listed under botanical names which isn't a real problem if you are prepared to use the plant index where common names are listed to find out about the *Phaseolus vulgaris* and *Lycopersicon lycopersicum* growing in your vegetable garden.

The plant descriptions vary in length and detail but include common names, country of origin and heights where relevant. Climate requirements and other cultural information is provided in the text.

There are a number of lengthy discussions, set out as special sections, on garden favourites (e.g. roses, azaleas, ferns, bougainvilleas). The descriptions are often longer and more general information is provided as well as more detail on cultivars available.

Most descriptions are accompanied by a photograph. There are over 2000 plants covered so not all are illustrated by the 1500 photos. The photos are excellent and are of real assistance with identification. Of concern is the photo of *Ficus rubignosa* 'Variegata' (Port Jackson Fig) which is in fact a cropped version of the photo of *Liquidamber styraciflua* three pages later! This aside, there are a number of photos of inspirational gardens and water features — unfortunately too big for most backyards. Photo size varies from small (around 6 x 5 cm) to full page. The sections on propagation, pruning and the glossary have excellent line drawings.

The layout is excellent with names easy to find. The pages have been colour coded in an interesting way which can aid in finding topics once acquainted with the book. The special sections are distinguished by the backgrounds of light pastel tints.

Orchids are covered in a six page subsection of the indoor and patio chapter. There are only a few species and hybrids discussed but this is not a specialist book and they are treated in context with a garden. There are a few errors such as *Paphiopedilum* hybrids being described as epiphytic and *Pterobylis* rather than *Pterostylis*. The photo of *Cymbidium insigne* is definitely not although the text is OK. The photo labelled *Miltonia x hybridum* is a lovely plant of Phalaenopsis persuasion. The text provides useful information although the plant selection is oriented to warmer conditions.

There are also lists of plants for special purposes, discussion of composting and sections covering pests and diseases commonly found in gardens.

More than enough plants are covered to keep even keen gardeners searching for sometime for the more unusual subjects. This book will probably have information on just about everything you can pick up at your local nursery and would make an ideal starting point.

Despite the errors I found, which are few, I believe "The Complete A-Z of Gardening in Australia" would make an ideal gift for anyone starting a new garden or doing alterations to one. It would also suit anyone who likes a good garden book to browse through.

Allison Webb

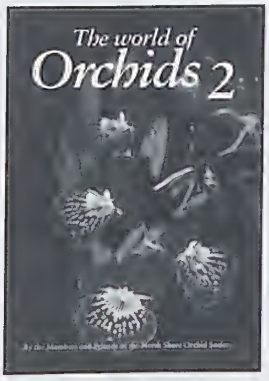
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The World of Orchids 2

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The second edition of "The World of Orchids" features all the well known genera favoured by the majority of orchid growers.

Each article is brief and well written and contains all the information that the author feels is necessary to grow the particular genus. It is important to remember that the methods of culture used by the authors are



those which they have found to be successful, and the information may need to be modified to suit particular conditions.

Colour photographs from many contributors and line drawings by Walter T. Upton complement the text of this extremely interesting and useful book.

Copies of "The World of Orchids 2" are available from the North Shore Orchid Society P.O. Box 711, Willoughby, NSW 2068.

Generous discounts are available to Orchid Societies who order 10 or more copies.

Cattleyas

Cattleyas are now in full growth. Many plants are now in sheath. Many growers still like to use organics on their catts. GARDEN PARTY is still the most favoured of organics followed by FISH EMULSION. Apply weekly and keep plants just moist especially after fertilising.

Watch for scale insects. They have been very bad this year. There are many preparations you can use to control scale. The hobby grower could use ANTISCALE®. This works quite well. Check roots for cockroaches. These little pests can do untold damage. Check with your local garden centre on what to use. Some products work better in certain areas than others and also registration varies from state to state.

Make sure your plants get plenty of light and air during the autumn months. Only bring your plants in under cover when buds start to break sheath.

Cymbidiums

Over the next couple of months cymbidiums should be showing their spikes. If you have some very over grown plants you can divide them if you are very careful. Try to keep the divisions as large as possible. At least four bulbs is a good number to aim for. Be careful of the developing spikes. One knock and they are gone. After dividing give plant a good soaking with your favourite root hormone to get the roots on the move as quick as possible. Some growers like to WUXAL® for a few weeks after dividing. *Do not over water or let plants dry out.*

Now is a good time to pot on your divisions and seedlings into larger pots if required.

Watch for two-spotted mites as once the spikes have developed it is harder to control them.

Now is a good time to give plants a good spray to clean up all fungi that could be around the green house. DACONIL® alternating with MANCOZEB® should clean up the fungi and a good spraying with ROGOR® will clean up the mites.

In most areas a good watering every four or five days should suffice. Now is the time to change over to a low nitrogen, high potassium fertiliser such as PETERS BLOSSOM BOOSTER or H.S.O. 12. Seedlings can still have a reasonable high nitrogen fertiliser such as GARDEN PARTY or H.S.O. 22.

Masdevallia/Dracula

Hopefully for most of us, the extremes of summer are now just a memory. It has not been an easy summer for Pleurothallids. In fact it has been one of the worst on memory for most Andean species and many of the usually tolerant hybrids have also suffered.

Hopefully now, with the softer and cooler Autumn weather with its temperature stability, now approaching, it is time to think about getting those *Masdevallia* and their alliance out of flask and established before the onset of the winter cold.

In the Dandenong ranges around 40km from Melbourne, the climate allows us to de-flask all during the winter period, with the assistance of a little bottom heat and with the plants enclosed within a cutting frame, which has provision for controlling ventilation as well as maintaining the temperature. As there is no pseudobulb, best results with the *Pleurothallidinae*, are always obtained, with large plants ex flask. I try not to send flasks out until they have both good roots as well as seedlings around 4 to 6cm high, at least.

I have now gone back to the use of good quality Tasmanian live *Sphagnum* and using a wider spacing of the seedlings allows better air around the leaf/root junction. This will always be the problem point with all within the *Pleurothallidinae*.

Still, I prefer not to use fungicide as tests have proved the delicate tissue of *Masdevallia/Dracula* seedlings ex flask are burned. As well, fungicide appears to restrict the development/establishment of an all important mycorrihzal relationship.

I like to loosen the top of the flask for a week, or even longer before removing the seedlings. I actually loosen the top, then drape a little Glad Wrap, or similar over the lid to prevent the ingress of harmful plant pathogens.

This exposure to the normal atmosphere, assists the small plants in beginning the hardening process and in particular, cuticular development. The flasks must be observed DAILY at this stage and at the first sign of any infection, the small plants MUST be removed and planted up.

Remove the seedlings by tapping the base of the flask on the palm of the hand, this will loosen the gel, upend the flask and allow the contents to fall into a bowl of water, GENTLY! The gel may be removed by directing a gentle stream of tepid water from the tap over the seedling/gel mass. Any stubborn agar may be removed with a camel hair brush, it must all come off, moulds, fungi and bacteria, love it!

Drain the seedlings on a sheet of newspaper the plant up LOOSELY as a community pot, into a good quality finely chopped *Sphagnum* which was previously microwaved, then, wrung out to a barely damp state.

Substitute seedling bark if you prefer. Personally, I am now removing the seedlings, washing them of all gel and then returning them to the clean flask, to rest upon a barely moist piece of towel. The lid is loosely sat upon the flask top. The seedlings can remain in the flask until new root development is observed. The kitchen windowsill is a recommended site but beware of the sun as it settles lower in the sky at this time. I have not thus far noted damp off using this method. Two to three weeks should see the seedlings hardened to the point where your usual planting technique can be implemented.

Upon planting out, the moss or bark can be wet with a weak solution of Maxicrop® or other seaweed fertiliser. I do not like the chemical fertilisers for this work, as the moss can be soured. The seedlings should be generously spaced to allow all important air movement around the leaf/root junction. Take care never to bury this area, with your mature plants as well. Spacing 6/8 seedlings, in a 6cm or 2½ inch squat pot is about right. If you do not have an enclosure with the correct humidity and temperature for the work, say 75% R.H. with a temperature constantly around the 18 to 20°C mark, enclose the seedlings in a converted Coke bottle or small pot in a plastic bag. Bean shoot punnets, cheese containers or strawberry containers are other possibilities, the container need not be air tight, as the exchange of normal air will hasten the hardening process.

However remember, YOU WILL KILL YOUR SEEDLINGS if, the bark or moss is constantly wet! Water moulds just love wet mixes.

Don't be disappointed if some seedlings perish. This is nature's way of sorting out those that are genetically weak.

If the weather turns cold, a little gentle bottom heat at this stage is most beneficial. Observe the seedlings regularly for infection or dead leaves, remove this material immediately as it is the site for the development of fungi.

Six to eight weeks should see the little plants large enough to be individually potted, there is no hurry for this however.

If you prefer to leave the seedlings longer, the introduction of a little weak fertiliser to which has been added a few drops of "Formula 20", will hasten the growth. As the seedlings are enclosed, they may be grown in the glass house, find a spot where it is neither too hot or cold and make sure NO direct sun falls on the little plants. I repeat, do NOT over water. *Constantly wet will kill!* A fine sprayer/atomiser is the preferred method of applying just enough water to prevent dehydration at this critical time. If you can collect rainwater and it is not acid, use it, otherwise, using a fish tank/aquarium oxygenator/aerator in a large



bucket, or rubbish bin of tap water for a few days, will see most of the unwanted additives provided for you by your ever caring council, such as chlorine, evaporate. With the water near pure and saturated with oxygen, as is normal in situ, growth by using this oxygen rich water will astound you!

Do not carry out your deflasking, on hot dry days as dehydration can occur before the plants are in their "Humidicrib". I am also serious when I advise the grower to carry out this work during or just after rainy weather, the extra humidity in the air at this time, will assist the plants in establishing during the first few days. All should go well so it is possible, with *Masdevallia,* that your first flowers may be seen in as little as 12 to 18 months time. When the seedlings are 50 to 60mm high, finally pot into SMALL pots with good quality *sphagnum*, ⅔ moss with ⅓, at the bottom, of stone, crock or bark for drainage, which must be excellent and the moss loose, as air MUST reach the roots for best results. Good quality seedling bark may be used with a good result.

When using moss, polystyrene granules, not too fine, may be added at up to 20% of the volume of the moss. The polystyrene assists in keeping the moss and bark open and does not, like other additives, absorb water. As well, it appears reasonably inert.

I find Perlite® and similar, holds far too

much water for this work.

Care should be exercised in the fertilising of the small plants, dilute your favourite proven product to at least a third or even less, of the recommended strength, before application. Too strong a solution will promote the growth of horrible green slimes on the top of the moss which will effectively preclude the entry of that all important air to the root zone.

Get everything right and the next few months will see spectacular growth, with the hopeful promise of a great flowering later in the year.

Natives

What hot weather we had this year is now over so winter culture begins. Reduce watering so plants get a chance to dry out a bit — if rain allows. It is better to water early in the day so water does not sit on plants at night when temperatures drop. Handwatering is best as you can control the amount of water each plants gets, even missing some if necessary. Fertiliser should also be reduced if not completely stopped as growth slows in the cold. *Sarcanthinae* are an exception as many continue to grow in the colder months if conditions are suitable, particularly southern species such as *Sarcochilus falcatus, S. fitzgeraldii* and *S. hartmannii*. These might appreciate some food (very dilute) while the roots tips are bright green indicating active growth.

Natives in bloom now include the *Dendrobium bigibbum* complex and hybrids along with some other northern species such as *D. bifalce, D. johannis, D. capitisyork* and their hybrids, *D. bowmannii, D. schneiderae, D. rigidum, Liparis reflexa, Bulbophyllum weinthalii, B. exiguum, B. schillerianum, B. shepherdii, B. sladeanum, B. macphersonii, Phalaenopsis rosenstromii.*

Many spring flowerers, such as the Dendrocoryne will now be starting to produce their flower spikes. This is a good time to remove any dead material such as leaves and old flower spikes to make preparation for shows easier later. Beware of aphids as they can appear at any time in many areas and will soon suck the strength from developing spikes ensuring they do not develop properly if at all.

Be sure any plants which don't like the cold are under cover. This includes both tropical and cooler growing orchids. *Sarcochilus ceciliae* is one species which doesn't like cold winter rain although is quite cold tolerant. An area set aside with a special roof or some form of cover can help. I have found that root growth of this species is much stronger if winter conditions are dry.

If the February cold spells did not encourage you to check your heaters in the hothouse, do it now. Remove any shading to allow higher light levels for winter months. Any tropical plants which require a dry spell should be placed where they don't get a lot of water. Or handwater and be sure they don't get soaked. Pay attention to humidity once the heaters are in regular use. It can be easy to forget to water in the hothouse once bushhouse watering is reduced or if rain is frequent. The solid cover which keeps out the rain! Red spider and mealy bugs can become rampant if conditions are dry. Spray them if necessary as they can really do a lot of damage if left unchecked and be sure to increase humidity and air movement.

Deflasking is OK at this time. The cooler weather reduces the chances of dehydration and loss due to fungal infection. Slugs and snails will still be rampant and they really love tender, juicy seedlings. If there is room in the hothouse until spring the extra warmth can help get seedlings off to a quick start. Be sure to mist daily to prevent dehydration.

Prolonged damp conditions allow bacterial and fungal problems to develop. However, these are usually far less a problem in winter than in the warmer months. After last summer I imagine many growers have had a taste of these problems.

Winter culture mainly involves tidying up plants and their surrounds, while the plants prepare for spring flowering. Watering is greatly reduced and care may be needed to protect some plants from cold damage. The main problems can be reduced humidity in heated houses or frost damage on exposed plants. Pest problems are usually reduced to mites and mealy bugs in dry conditions and snails and slugs. Aphids can also appear.

Paphiopedilums

The days are drawing in, the weather is cooler and the buds are beginning to appear in quantity in the *Paph.* collection.

Regular — but not too frequent — watering and fertilising should be continued as before. The idea is to prevent the plants from drying out whilst avoiding an almost sodden condition. Fortunately the open nature of bark mixtures allows a fair degree of latitude with watering, but the potting material is breaking down by now and it will hold moisture for longer than it did when fresh. All watering should, by now, be done as early in the day as practicable. Avoid, if possible, watering when the weather is wet — even in the glasshouse.

Shading should be reduced for the winter; this is best done shortly after Anzac Day.

As a general rule the white Paphs. begin to flower around late April, followed by the greens, the reds, the autumn shades and finally the spotted varieties late in the season. Modern hybrids, with their very mixed ancestry, often depart radically from this rule. Many whites, incidentally, do not do well under cold conditions.

If you grow Paphs. for the show bench it is important to avoid crooked or asymmetrical flowers. This is best done by keeping the stems upright and in good light from the beginning. Keep an eye out for buds caught under leaves and take the appropriate action. Whilst the growing stems are too soft to stake within about 5 cm of the bud, they can be staked when they are somewhat longer than this. Staking is seldom necessary if the emerging buds are kept in good, even light. It is a good idea to shift plants, as buds are found, to a bright, evenly lit spot where they can be well spaced and, preferably, faced to the north. This area should be well baited for snails and slugs, which seldom damage *Paph.* plants but have no such compunction concerning the buds and flowers.

A good *Paph.* is more likely to catch the judge's eye if the flower looks at him rather than at the floor. You can train the flower to look slightly upward by allowing it to open with the stem leaning forward about fifteen degrees or so. The pot should be put in this position when the bud is about to open and kept there for about a week after the flower has fully opened. The bud and stem must always be vertical when viewed from the front, otherwise the lip will lean to one side.

I do not advocate any kind of manipulation using cardboard, tissues, paper clips or the like. This invariably produces an unnatural looking flower which an experienced judge can spot at a glance.

Phalaenopsis

Watering:— If weather is very hot and dry then water every morning. In times of heavy or overnight rain keep plants under a solid roof and reduce watering. As nights become cooler do NOT water in afternoon.

Light:— Phalaenopsis will still require up to 90% shade, particularly in the tropics.

Fertiliser:— Continue as for February/March. Do not fertilise dry plants — always water beforehand. Fertilise weekly alternating over a 4 weekly period as follows—

Wk.1. — Inorganic low nitrogen — Campbells A, Aqua-Km etc.
2. — Wuxall Foliar or similar.
3. — Inorganic low nitrogen — as for Wk.1.
4. — Organic — Fish Emulsion or Nitrosol.

Pest Control:— Spray with Mancozeb and Kocide every 4 weeks or alternatively use Ridomil MZ WP which is both a surface and systemic fungicide. Use a bactericide such as Physan 20 weekly to control soft rot.

Use Pyrethrum or Diazanon every 4 weeks to control scale and insects. If ants are a problem a dose of Lorsban should get rid of them. Keep a close watch for mites and spray with a miticide as necessary.

Vandaceous

Watering:— Don't allow to dry out. If orchids are in teak baskets or in pots without potting mix, then water thoroughly every morning. In hot dry conditions, a late afternoon misting is also beneficial. If orchids are in fine potting mix then watering every second day will probably be sufficient with a misting on the alternate days.

Light:— Strap leaf vandas, ascocendas and other genera with wide leaves require at least 50% shade. Semi-terete and other narrow leaf types require less.

Fertiliser:— Continue as for February/March. Fertilise weekly, alternating over a 4 weekly period as follows:—

Wk.1. Inorganic low nitrogen — Campbells A, Flowfeed HP8, or Aqua-K.
2. Wuxall Foliar or similar.
3. Inorganic low nitrogen — as for Wk. 1.
4. Organic — Fish Emulsion or Nitrosol.

Pest Control:— Fungicide every 6 weeks (e.g. Daconil or Ridomil MZ WP. Use Diazanon or Pyrethrum to control insect pests.

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Editor's Report

Friendships

I guess there are many of you who like myself have made lifelong friendships from those we have happened to meet along the pathway of orchid growing. These are the people we can confide in, share the good times as well as the bad times with, and above all trust.

One such friendship started for me just 20 months ago when I met Dr. Miles Seton. Until then I had only made a casual acquaintance with Miles by phone. It had always been my intention to publish his life story and to document the hybridising results he had achieved with the species *Cym. suave*. A trip to Sydney in 1994 gave me the opportunity to accomplish my mission.

I find the registered names for a number of his *Cym. suave* crosses imaginative and intriguing, like the cross *Cym. Cricket* x *Cym. suave* which Miles has named Tennis . . . now that simply is just not cricket!! Others sport such original Aussie names as Piccaninny, Bunyip, Oz, Jumbuck, Wallaby and Koala. Fitting names for precious little gems bred from a true blue Aussie.

The orchid world is indebted to Miles, who has almost single handedly pioneered the use of the Australian species *Cym. suave*, a field few other than Miles have persevered in. The doorway to this exciting and certainly different field of breeding has been opened by Miles, we look forward to a quantum leap in the next decade.

I feel privileged to bring you the story of Dr. Miles Seton, which I dedicate to a dear friend and his quest for and his attainment of summer flowering cymbidiums.

Stephen Early reviews three species cymbidiums, of which just a handful have been responsible for creating the beautiful hybrids of today. All too often we take this evolution through selective breeding for granted.

For those of us who have been given the honour, one of the great pleasures in growing old is the enjoyment derived from grand children. Unlike the responsibility of raising one's own children, grandchildren can be passed back to mum and dad when the going gets too tough.

For my wife Mary and I, the arrival of our first granddaughter, Annalise, was a wonderful experience — like a little angel sent from heaven, a "sweet treat" indeed. I stored this precious moment in my memory bank, vowing to one day name an orchid after her when the occasion arose. Last year I flowered a delightful intermediate seedling and named it *Cym.* Sweet Treat 'Annalise'.

Imagine my surprise and humble pride when *Cym.* Sweet Treat 'Annalise' was named Sage 1995 Cymbidium of the Year. The entire state nominations and category winners are featured in this edition of Cymbidiums Australia. Congratulations are extended to all the winners.

Finally, an interesting update of the National Committee meeting is presented by our President Graham Guest, as well he makes some exciting announcements.

Dean Roesler
Editor

President's Report

Your Vibrant National Society

The Committee of the Australian Cymbidium Society convened our 4th meeting in Sydney on the 9th February 1996 at the offices of Graphic World, the organisation responsible for producing this Review. This meeting was a follow-up to the agreement made by the Publisher and our Society, to assess the impact of Cymbidiums Australia, and how this publication could be further enhanced.

It needs to be reported that the National Committee is indeed a rare commodity — since our inception, the level of comradeship between representatives from the three states has been quite exceptional — hallmarks of an organisation that has the capability to achieve exciting services and events for our members. I believe that the following announcements are indicative of the success of our National Committee.

Cymbidiums Australia

1) in the next issue, a question/answer cultural segment written by a leading state identity (N.S.W., Vic. & S.A.) will be launched
2) professional advertising material will be produced, using a run-on of the cover of this month's Review
3) a membership drive will be encouraged for each state Cymbidium Society
4) more advertisers will be sought in Cymbidiums Australia — this is the mechanism whereby this section of the Review can be further expanded.

Our Challenge

Probably the most significant comment arising from our discussion with Graphic World came from their Managing Director, Ron Hoolahan — he advocated that our Clubs/Societies adopt a professional approach that serves our members.

"People belong to groups that are friendly, co-operative, informative, light, fun, and above all, offer considerable encouragement. They quickly become disillusioned when these facets are not provided . . . You also need to make your Clubs appealing to the younger generation".

Think about these comments, and it is obvious why Line Dancing currently is enjoying such remarkable success throughout Australia. This is the formula our Committee has consciously decided it will pursue with great vigour.

National Show

This point leads me to the exciting announcement that the inaugural Australian Cymbidium Society Show will be held on the week-end of 7th and 8th September 1996. We are determined that the Show will be everything that Ron Hoolahan suggested and more. For the growers of cymbidiums there will be the incentive of $6,000 cash in prize money, plus sponsor prizes. For the cymbidium lover, this is your opportunity to view the best display of cymbidiums ever assembled in Australia. For the person who just wants to have a good time, this will be an Orchid Fair — events, demonstrations, personalities at the Show, as well as a fine supporting social program.

The venue? The regional Victorian town of Ararat: a country town that has dedicated support from its Rural City Council which views this as the start of a long and successful union with our Society. This will be

"CYMBIDIUMS — KING OF THE ORCHIDS"

more than another Orchid Show, it is another of Victoria's tourist events. Naturally our National Committee, comprising Kevin Black, Kevin Brown, Dean Roesler, Peter Rochfort and David Allen, would like to meet and hear from as many enthusiasts as possible at Ararat.

Mark these dates down in your diary. Organise a bus trip with fellow enthusiasts. It will be even better than a night of Line Dancing!

National Awards And Major Sponsor

Within this edition are published the inaugural 1995 Cymbidium of the Year Awards. Next year there will be an additional category for Best Species, as well as the Miles Seton Award for the best new seedling that has within its parentage (up to 4th Generation) one of the Australian Cymbidium Species. All members of our Society are eligible.

Together with these awards is the announcement that Sage Horticultural has been appointed sponsor for these awards, with $500 cash provided annually — $250 for the Cymbidium of the Year and $50 for each of the other categories. Our sincere thanks are extended to Bob Campbell, Managing Director of Sage Horticultural, for his willingness to support these awards.

Criteria For Selection

Each of the states will annually nominate cymbidiums flowered by their growers over the previous 12 months. These nominations are then considered by the members of the National Committee, with each delegate required to vote for what they consider the most "eye-catching" cymbidium for each of the available categories.

Given this "appreciation" method, it was agreed that all delegates would vote, irrespective of whether individuals are accredited judges. Our aim is to select those plants that appeal to a wide cross-section of the public — in this context, all delegates have a valued opinion. Finally it is of note that the selection process was one enjoyed and supported by all delegates — quite good fun.

Cryptic Message

To members of the National Committee — next year is 1997, this year is 1996, and last year was 1995. What year were the National Awards first introduced?

Graham Guest
President

Club News from N.S.W.

1995 Seedling of the Year

Judging of the Cymbidium Seedling of the Year was once again conducted at the Club's November meeting from seedling winners benched at monthly meetings during the 1995 season. The monthly benchings occasion great interest with plants exhibited during the 1995 season being no exception. The Club places considerable emphasis on seedlings in an attempt to foster interest in gaining new varieties for the show bench.

In 1996 due to the generosity of a Club member there will be a prize of $1000 for the Seedling of the Year. Second and third prizes will be $200 and $100 respectively. The competition is open to all members of The Cymbidium Club of Australia, Inc. It is hoped that a prize of this nature will occasion a leap in interest in the Seedling of the Year Competition and result in a vastly increased benching of seedlings at monthly meetings.

There were some excellent seedlings benched at monthly meetings in 1995 creating a difficult task for the judges. A number of plants were prominent in the parentage of seedlings benched during the season including Cronulla 'The Khan', Lancashire Rose 'Maureen' 4n, Matipo 'Pink Globe', Greenoaks Finale, Jessie Blackiston, and various Red Beauties.

For further details and pictures of winners see the article, Sage 1995 Cymbidium National Awards.

Peter Rochfort
Carlingford, NSW 2118

Victorian Club News

C.O.S.V. December Meeting Report

The December meeting of the C.O.S.V. was our Christmas party night. While it was a party night we still managed to see 3 cymbidiums benched.

Early in the evening saw the arrival of that old gentleman in the red suit and white beard. He was there to present the prizes to the winners of the aggregate points competition for the year. The winners were: — Open Section Kimberly Orchids P & J Sunderland, Intermediate Section J & B Rowlands and Novice Section Len Porter and John Guario tied.

The party atmosphere continued when the Past President, Terry Poulton, took the floor for a special presentation. three members were inducted into the C.O.S.V. BACK BULB CLUB. The president Ern Kettle and 2 committee members, Andy Leamon and Noel Gard, received badges and silver back bulbs to commemorate the occasion. All three were obvious choices for the club, with Noel commenting that it was only a wide part, Andy declaring it was a solar panel for a love machine and Ern mumbling that someone would pay for this.

The evening continued with members receiving small gifts. All members then tucked into a superb supper, which again featured two large cream sponges from the Purcells. It was agreed that while it was an exciting year, all members were looking forward to 1996, to flower those new seedlings and hopefully to participate in a national Cymbidium show.



Left to right: Noel Gard, Ern Kettle, Andy Leamon and Terry Poulton.

David Allen
C.O.S.V. Editor

Sponsorship



Sage Horticultural is delighted to be the sponsor for the 6 prestigious annual awards given to growers from the Australian Cymbidium Society.

Sage Horticultural has been associated with the nursery industry for over twenty-five years and in particular have supplied many orchid growers with equipment including:

Glasshouses, shade houses, heaters, misting equipment, fertiliser injection, benching etc.

Sage Horticultural distributes Vitall Liquid Fertiliser through its newly formed company Sage Fertilisers Pty Ltd. Many orchid growers have started to use Vitall and have become committed to the product. Like other growers they have found Vitall outstanding when applied to the root system or after foliar feeding. Both rates of use is recommended at 1:200.

Larger bulbs and increased quality of flower spikes has been a feature following the use of Vitall Liquid Fertiliser. There are no mixing problems and no risk of blocked sprinklers or filters.

Growers have also found no build up of salt levels, also a well balanced nutrient level in tissue.

The overall strength and vigour of orchids is a feature — leaves become rich in colour and vigorous.

Sage Horticultural congratulates the winners of the annual awards and all other participants.

Our best regards to you all,

Bob Campbell
Managing Director, Sage Horticultural

Written by Ern Kettle — President of

The Cymbidium Society of Victoria

September, 1995

I first became aware of Vitall in 1993 after trialing other products for Sage. I was asked to try Vitall on my Cymbidium Orchids.

Orchids are prolific feeders and as such we were always searching for a fertilizer that was easy to use, but effective. As most orchid growers water and feed at the same time it was important to have a product that did not block filters and sprinklers all the time. Vitall is simple to use through GEWA dispensers and other types of spray equipment.

PH is also very important with orchids and because of the pine bark mix that is used as a potting medium, the pH must not change and Vitall feeds well without changing the pH.

The overall growth of the plants improved and former salt levels dropped. The secret of good cymbidium growing is to get large bulbs, which leads to more flower spikes and more flowers. Once again this was achieved with Vitall.

Vitall has now made its way into most orchid societies and growers are using it on all types of orchids.

Vitall leaves no residue whichever way it is applied, therefore saving time and money. I have no hesitation in recommending it to all orchid growers.

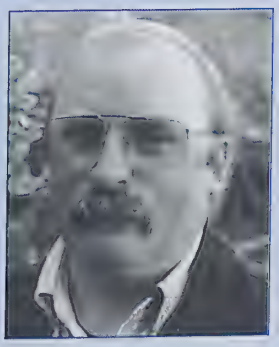
Ern Kettle

ERN KETTLE
PRESIDENT
CYMBIDIUM SOCIETY OF VIC

STATE EDITORS

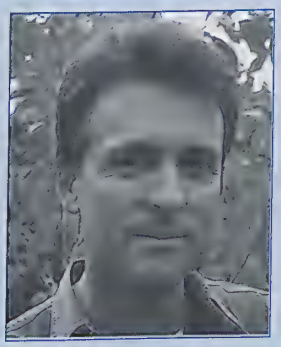
Send all Cymbidium Articles for inclusion in A.O.R. to one of the following:

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DAVID ALLEN
18 Wootten Crescent, Langwarrin,
Victoria, 3910
Phone: (03) 7891501

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SOUTH AUSTRALIA



WAYNE BAYLIS
15 First Avenue, Cheltenham,
S.A. 5014
Phone: (08) 2430702

Sage 1995 Cymbidium of The Year

Cym. Sweet Treat 'Annalise' CE/CCSA



Cym. Sweet Treat 'Annalise' CE/CCSA Owner: Dean and Mary Roesler, Kalbeeba, S.A. Hybridiser: Schaefers Orchids, Galston, N.S.W. Parentage: *Cym.* Mesa Zia x *Cym.* Sunbreeze — *Photo: Eddie Ng, Adelaide, SA*

Featured on the front cover and above is *Cym.* Sweet Treat 'Annalise' CE/CCSA a seedling flowered in 1995. For the purist, this is a significant selection, it being derived from the species *Cym. ensifolium*, through *Cym.* Peter Pan 'Greensleeves' 4N.

We have predicted over the years that one day a seedling from this type of parentage would achieve such an accolade — yet, probably thinking at the same time that it was still a while down the track. Twenty years ago the "best of the best" cymbidiums were flowered in late August and September. The past decade saw the emergence of shapely *Cym. erythrostylum* derived hybrids which set new standards for June, July and August flowering cymbidiums.

With *Cym.* Sweet Treat 'Annalise', we now have a Champion which flowers in late April, May — demonstrating the marvellous evolutionary process cymbidiums are undertaking.

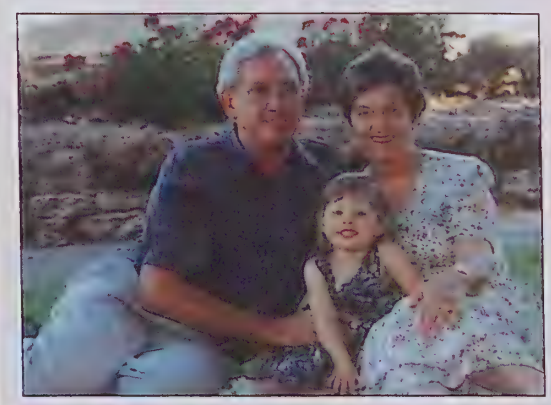
Congratulations are extended to the hybridiser, Schaefers Orchids, and to the owners Dean and Mary Roesler. Schaefers Orchids are having a considerable impact upon hybridising in Australia and the *Cym.* Sweet Treats are but one example of their expertise. Congratulations to Neville and Judy Schaefer of Galston N.S.W.

Dean Roesler is the popular Editor of Cymbidiums Australia. He no doubt would be both embarrassed and overjoyed by taking out this prestigious award. A student of hybridising, a "cymbidium freak", Dean lives for his orchids. His exploits in the Cymbidium World are well known across Australia, and I know that his many friends and colleagues would warmly acknowledge Dean's achievement.

Well done, and a message to Dean from across the desk — all of Australia is aiming to flower that new seedling to beat you for next year's award!

P.S. Dean tells me *Cym.* Sweet Treat 'Annalise' started opening on 15th February this year!

Graham Guest
President



Cym. Sweet Treat 'Annalise' CE/CCSA was also winner of the 1995 Cymbidium Club of S.A. Inc. Seedling Nomination and winner of the Australian Cymbidium Society, 1995 Best Seedling Cymbidium

Dean and Mary Roesler with granddaughter Annalise after whom *Cym.* Sweet Treat was named — see story in Editor's Report

Best Standard Cymbidium

Cym. Khan Flame Sheena



Cym. Khan Flame 'Sheena'. Owner: Bryants Orchids. Hybridiser: Bryants Orchids. Parentage: *Cym.* Cronulla x Yowie Flame.
Winner of: Cymbidium Club of Australia Inc. (NSW) — 1995 Best Standard Cymbidium, Members Choice and Seedling of the Year.

Victorian Nomination

Standard Cymbidium
Cym. Kelly's Winter 'Patricia' HCC/OSCOV



Cym. Kelly's Winter 'Patricia' HCC/OSCOV. Owner: Vic Haskard, S.A. Hybridiser: Adelaide Orchids. Parentage: *Cym.* Winter Wonder x Lois Kelly.

South Australian Nomination

Standard Cymbidium:
Cym. Kelly's Winter 'Golden Sovereign'



Cym. Kelly's Winter 'Golden Sovereign' Owner: Murray Weston, Dernancourt, S.A. Hybridiser: Adelaide Orchids Parentage: *Cym.* Winter Wonder x Lois Kelly — Photo: Eddie Ng. Adelaide S.A.

Best Miniature Cymbidium

Cym. Sweet Devon '1103' CE/CCSA



Cym. Sweet Devon '1103' CE/CCSA Owner: Keith Northcote, Warradale, S.A. Hybridiser: D.M. Cannon. Parentage: *Cym. suave* x *devonianum.*

Victorian Nomination

Miniature Cymbidium:
Cym. Sarah Jean 'Ice Cascade'



Cym. Sarah Jean 'Ice Cascade' Owner: John Guario, Victoria. Hybridiser: Valley Orchids, S.A. Parentage: *Cym. pumilum* x Sleeping Beauty.

New South Wales Nomination

Miniature Cymbidium:
Cym. Greenoaks Finale x Kyancutta



Cym. Greenoaks Finale x Kyancutta. Owner: Helen and John Palmer, N.S.W. Hybridiser: Helen and John Palmer (Mini World Orchids) Parentage: *Cym.* Greenoaks Finale x Kyancutta.

Best Intermediate Cymbidium

Cym. Greenoaks Finale x Winter Fair



Cym. Greenoaks Finale x Winter Fair. Owner: Helen and John Palmer, N.S.W. Hybridiser: Helen and John Palmer, (Mini World Orchids). Parentage: *Cym.* Greenoaks Finale 'Pink Magic' x *Cym.* Winter Fair 'Olympics'.

South Australian Nomination

Intermediate Cymbidium:
Cym. Willunga Royal 'Orange Delight'
CE/CCSA



Cym. Willunga Royal 'Orange Delight' CE/CCSA. Owner: Mills Orchid Nursery. Hybridiser: Mills Orchid Nursery. Parentage: *Cym.* Showoff x Willunga Magic.
Winners also of: Cymbidium Club of S.A. Inc. 1995 Cymbidium of The Year — Photo: Eddie Ng, Adelaide, S.A.

Victorian Nomination

Intermediate Cymbidium:
Cym. One Tree Hill 'Doris' HCC/OSCOV



Cym. One Tree Hill 'Doris' HCC/OSCOV Owner: Terry Poulton, Victoria. Hybridiser: Geyserland Orchids. Parentage: *Cym.* Coraki x Dolly.

Best Novelty Cymbidium

Cym. Terama Beauty 'Gowrie'



Cym. Terama Beauty 'Gowrie'. Owner: Vic and Elaine Pearce, Victoria. Hybridiser: R.W. Pollock, Ulladulla, N.S.W. Parentage: *Cym.* Terama x Red Beauty.

South Australian Nomination

Novelty Cymbidium:
Cym. Leopard Lady 'Mary Smith'



Cym. Leopard Lady 'Mary Smith'. Owner: Joe and Francis Janko, Seaton, S.A., Hybridiser: Bermar Orchids. Parentage: *Cym.* Sleeping Beauty x Jean Slattery

Victorian Nomination

Seedling Cymbidium:
Cym. Dorothy Stockstill 'Alana'



Cym. Dorothy Stockstill 'Alana'. Owner: Brian and Dorothy Noble, Victoria. Hybridiser: Geyserland Orchids (Reg. E. Stockstill). Parentage: *Cym.* Phar lap x Miss Muffet.

NOTE: *Cym.* Khan Flame 'Sheena' was the New South Wales Nomination for Seedling Cymbidium — N.S.W. did not nominate a Novelty Cymbidium.

Dr. Miles Seton's Quest...

Summer flowering Cymbidiums

by Dean Roesler

The Australian species *Cym. suave* is found growing in a long narrow belt from southern New South Wales, commencing just above the Victorian border, and extending northwards along the eastern coast to southern Cape York in Queensland. It can be found growing from sea level to an elevation of about 1200 metres, preferring the coastal areas, and never venturing over to the drier side of the Great Dividing Range.

Its flowering time is August to October in the tropics and from October through until January in the more temperate range of its distribution. Hybrids from it flower over a similar period of time without bud drop and are long lasting, often keeping well into January. These are important attributes to consider when breeding for summer flowering cymbidiums.

This delightful little gem, with the tiniest flowers of all the species cymbidiums, grows in hollow boles of tall, eucalyptus trees or at ground-level in the rotting stumps of sawn off trees and can be found in the open forest land surrounding Bermagui, where our story begins.

Bermagui, with a population of about 1000, is a quiet little commercial fishing and tourist resort on the far south coast of New South Wales. From its shores the sea slips swiftly into the deep dark waters of the Continental Shelf which is home to that great fighting game fish, the black marlin.

It was made famous as a big game fishing port in the 1930s by Zane Grey, renowned American writer — made famous too by the exploits of a local lad prosecuted for riding bare-back on top of a surfacing whale in 1992. It is visited whenever possible by Australia's great shark, not the fish kind, but the golf type, Greg Norman, the 'Great White Shark'.

My first visit to this lovely town in late July of 1994 was not inspired by the big-game fishing off the Bermagui coastline or whale watching. I had come to meet the man who has made and registered more crosses with *Cym. suave* than any other person in the history of cymbidium breeding.





Cym. Bunyip 'Precious Memories'

The sign by the gateway on Bega Road displayed the name Nerimbah while the name above the letterbox simply read Seton. The short winding track from the roadway through natural timbered land led to a magnificent setting for a two-storey house, with breathtaking cliff top views overlooking the Bermagui coastline.

I had come 1755kms to meet Dr Seton, and as we clasped each other's hand, I felt so thankful and privileged to have experienced this moment.

Miles Seton is a gentleman in every sense of the word. A quietly spoken man who almost single handed has pioneered the use of the Australian species *Cym. suave* in a breeding programme spanning over 20 years. Hybridising with *Cym. suave* is an accomplishment few other than Miles have achieved or even persevered with.

This story is dedicated to a dear friend and his quest for summer flowering cymbidiums.

Born 16th November 1916, Miles attended St. Clements School, Marrickville Public School, Trinity Grammar School, Canterbury High for Year 11 and then on to Sydney University. After six years Miles graduated with honours in 1940.

At this stage in life Miles wanted to join the services however he did one year in Pathology at Prince Alfred Hospital where he met his future wife Gwen and later married. He then joined the Army, went to Western Australia from where he was posted to the position of Medical Officer on a troop ship and went all around Australia and into the islands of Papua New Guinea and New Caledonia. He was discharged from the Army after the war in 1946 and commenced practice in Hurstville with a Dr. Burke and was very happy.

Dr. Burke suggested he go to England to sit for his FRCS (Fellow of Royal College of Surgeons). An extremely shy person, Miles also suffered from Otosclerosis. Unfortunately an operation to help with his deafness was a complete failure and



Cym. Bunyip



Cym. Bunyip



Cym. Bunyip



Cym. Bunyip

this left him in the situation of not being able to hear properly at lectures. Although passing the first part of his exam only four days off the ship, his hearing impediment caused him much distress and subsequently led to his failure after two attempts at the second part of his FRCS. Returning to Australia, a second operation led to a slight improvement in his hearing and he returned to his general practice in Hurstville.

Tragedy struck when his son, Michael, died in 1967. He was in his 3rd year of a medical degree. This influenced Miles to retire early and in 1972 he moved to Bermagui where he built on a beautiful block of land which he had purchased in 1966.

One of the builders, Ron Inwood, was keen on orchids and showed him how to hybridise with them. Miles' interest in orchids was kindled, especially in cymbidiums, although he had cattleyas and phalaenopsis. The latter two required a hothouse which he found too expensive.

As his interest in cymbidiums grew even more, it found Miles travelling up to the orchid auctions held in Sydney. He would leave Bermagui in his Landrover at about 2:00 am arriving in time for the auction at 9:00 am, then return home the next morning after driving through the night with his load of plants. This he would do at least once a month.

Three shade houses were built to hold this ever increasing collection. Built amongst the natural scrubland setting at the rear of the house, these timber framed buildings, each approximately 15m by 5m, are covered with varying percentages of glass in the walls and with shadecloth roofs, and act as both growing and flowering houses — the plants remaining permanently within.



Distribution of *Cym. suave* shown in yellow

Around the Bermagui region *Cym. suave* can easily be found. In the milling and sleeper cutting areas, large mounds of sawdust can be seen covered with *Cym. suave* plants, germinated from the abundant seed falling from the hundreds of seed pods on plants high in the trees.

* * *

By this time he was heavily involved in hybridising and his fascination for *Cym. suave* had become apparent. I asked Miles to tell of his experiences with *Cym. suave*, to which he replied. "I first became interested in *Cym. suave* when I saw it at Huskisson near Jervis Bay on the south coast of N.S.W. whilst on holidays as a teenager, and I thought what a delightful little flower it was. Later, when I was in my 30s, I saw it at Lake Conjola, which is further south, and I took some plants home



Cym. Koala

with me to try and grow, without success.

Two foresters gave me three *Cym. suave* plants in 1 metre logs which I tried hybridising with. I also took notes of their growth habits. My written records of the hybridising processes, which I kept in great detail, were kept in a drawer which I thought very safe, until one day I opened it to find practically all of my notes had been eaten away by mice. Fortunately, one book of very valuable notes had survived from 1977.

Stan Baglin who worked with Alvin Bryant told me to hybridise the larger flowers onto the smaller flowers of *Cym. suave* which I tried for 3 to 4 years, making 1000s of crosses with practically no results until I tried doing it the other way, with immediate success. *Cym. suave* is an excellent pollen parent, with almost a 100% success rate.

There are of course exceptions to the rule — one *Cym. suave* clone, which I grew in a small pot, held 24 pods. A number of my successful registrations were done on it. Unfortunately I lost this plant and was unable to find another which would hold pods.

I found that *Cym. suave* usually flowered on the 26th October each year, and lasted for several months. This would vary by a few days at the most.

When breeding with *Cym. suave*, crossings will demonstrate a "take" in 7-10 days, the column swells up and then the ovary begins to thicken some three weeks later, and continues on to form a pod. However, there is a gradual loss of pods, especially with heat or direct sun at any time of the day. Care must be taken from the outset, even changing the position of the pot, or surrounding orchids that shade the pod. It is thought that the pod quickly acclimatises to the existing conditions and any changes may be disastrous.

In spite of all the care given, a small pod which gets through to 6 or 6½ months and suddenly "goes off" will have little or no seed. The large pod has a greater chance of lasting through to 7½ months and containing viable seed. It has been my experience that 7½ months is the longest these hybrid pods last without splitting. In practice, I sent the pods to the laboratory when 6 to 6½ months old".

* * *

In search for summer flowering cymbidiums, Miles also used the species *Cym. madidum* as well as *Cym. devonianum* as parents.

He found *Cym. madidum* just as difficult as *Cym. suave* when it was used as a pod parent. Some plants appeared to be quite fertile, holding pods for 6 to 7 months with nothing in them. Some carried through the full time with no results, and some aborted immediately.

Cym. madidum is vegetatively far from compact, therefore great care must be taken in selecting clones to breed with. It is variable in both colour and bulb and it is essential that plants of the smallest bulb size and cleanest colour be obtained for breeding purposes.

Miles then went on to talk about the breeding he has done with *Cym. suave* as well as other observations documented by him.

"My first hybrid with *Cym. suave* was Piccaninny *(Cym. suave* x Tethys) which was registered in 1983. It produced beautiful, small, deep red flowers. My most famous cross is *Cym.* Bunyip (Carisona x *Cym. suave*). I was elated when they first



Cym. suave growing in cultivation in Norm Shipway's front garden, in the western Sydney suburb of Girraween, N.S.W. The large plant carried just over 4000 blooms on 77 spikes



Cym. Bunyip



Cym. Princess of Wales



Cym. Piccaninny



Cym. Piccaninny



Above and below: Shadehouses featured amongst the beautiful, natural timbered bushland





An established *Cym. suave* plant in the rotting trunk of a sawn off tree. At this height it continually becomes fodder for grazing kangaroos and wallabies



Cym. suave growing in the hollow bole of a Eucalypt



Cym. Bunyip

flowered with delightful little blooms in a wide range of pinks and polychromes. My favourite cross would probably be *Cym.* Jumbuck (Negrito x *Cym. suave*), producing outstanding dark burgundy flowers. Another delightful cross was *Cym.* Koala (Fiona x *Cym. suave*), which produced beautiful little yellow flowers.

From my experience, *Cym. suave* traits that are carried through into the First Generation Hybrids are:

1) Leaf Form: deep green, narrow and wiry

2) Perfume: most are perfumed, but not all

3) Flowering: from old leaf axils, mostly on both sides of the pseudo bulb. Multiple spiking is a common trait. *Cym. suave* has monopodial type growth, unlike the normal cymbidium bulb. Its bulb will continue to grow in a rather indeterminate fashion and bloom over 3 or 4 years with many spikes from the same bulb.

4) Spike Habit: short spikes in an upward, gently arching manner. Long spikes, in a pendulous fashion

5) Flower Form: the flower usually has good substance but is narrow. Often a narrow lip. However, this is not always the case, as in 50% of the Bunyips and also Koalas, the lip and flower are quite broad.

I find *Cym. suave* difficult to maintain in



Cym. Koala



A small plant of *Cym. suave* carrying numerous self-pollinated seed pods



Cym. Bunyip



Cym. suave establishing itself in the leaf-litter gathering in the hollow of a tree trunk

cultivation for any length of time. This is probably because when growing in the wild it develops a huge root mass, penetrating deep into the rotting heartwood of the tree and often extending for distances up to 10 metres. Plants collected from the wild have this root system severely damaged, this appears detrimental to the plant's well being.

Certainly the tetraploid *Cym. suave* will be achieved in the future and this will revolutionise the breeding done with it in much the same way as the tetraploid Peter Pan has influenced the hybridising for ultra-early cymbidiums.

My involvement with cymbidiums has given me a great deal of pleasure. I can look back to when as a teenager I saw *Cym. suave* flowering for the first time. It has given me lots of enjoyment to see new seedlings from it flowering for the first time."

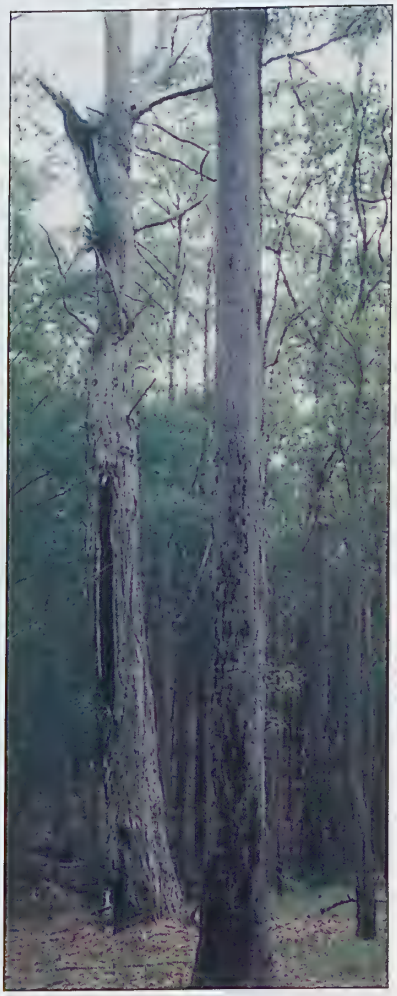
In the future one could imagine a tetraploid Bunyip, Piccaninny or Koala, hopefully with the same perfume as the diploid clones and with a large number of spikes and flowers of good form, displaying all the beauty and charm which is so typical of the *Cym. suave* hybrids. But then, we are on the brink of a new world where genetic engineering has the potential to change everything bit by bit — creating a whole range of new colours, forms, sizes and perfumes, and with them present endeavours will be seen as remnants of a bygone era.

In the meantime however, we thank Dr Miles Seton for showing us the way in his quest for summer flowering cymbidiums.

Dean Roesler
Lot 14, Lawson Road
Kalbeeba
South Australia 5118

Footnote:

When visiting Miles recently he asked me to mericlone a number of his best Bunyip clones. When ready they will be made available to orchid enthusiasts, with proceeds going towards the Australian Cymbidium Society.



Open forest land, typical habitat of *Cym. suave*

Cymbidium suave Registrations		
x *pumilum*	= Scallywag	Keith Andrew 1969
x *madidum*	= Kuranda	Greenoaks 1972
x Esmeralda	= Evonne	D. Cannon 1973
x *eburneum*	= Kevin Ragen	H. Boyd 1976
x *devonianum*	= Sweet Devon	D. Cannon 1982
x Tethys	= Piccaninny	M. Seton 1983
x Carisona	= Bunyip	M. Seton 1986
x *finlaysonianum*	= Silicon Chip	M. Seton 1987
x Oiso	= Oz	M. Seton 1989
x Negrito	= Jumbuck	M. Seton 1989
x *canaliculatum*	= James Webeck	E. Webeck 1989
x King Arthur	= Wallaby	M. Seton 1992
x Voodoo	= Sunburst Finish	P. Gomes 1992
x Fiona	= Koala	M. Seton 1992
x Sabre Dance	= Dreamtime	M. Seton 1994
x Showgirl	= Princess of Wales	M. Seton 1994
x Cricket	= Tennis	M. Seton 1995
x Len Southward	= Val Peck	E. Stockstill 1995
x Brown Eyes	= Dean Roesler	M. Seton 1996

Cymbidium Species –

A comparison of the autumn flowering species *tracyanum, iridioides* and *erythraeum*

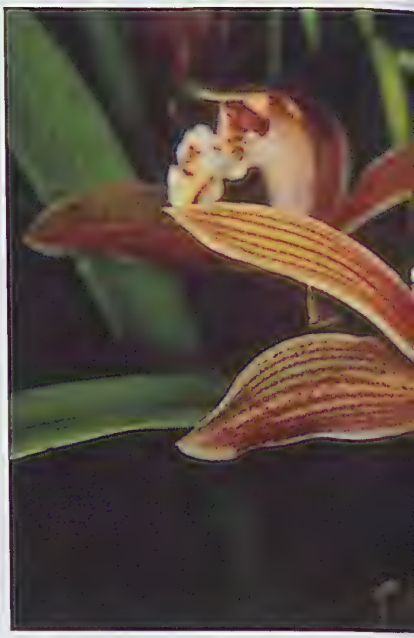
by Stephen Early



Cym. tracyanum

These three species are all closely related being in the subgenus Cyperorchis and section Iridorchis. They grow in similar and often the same locations in Nepal, North India, Bhutan, Burma, South West China and North Thailand from 1000m to 2800m. With such a geographic variation it is not surprising that there is a reasonable amount of varia-





Top: *Cym. erythraeum*

PARENTAGE COUNTS:

A New Generation of Hybrids

Stargard 'Cistine' flowered for the first time in May, 1995. In 1995 'Cistine' had 2 spikes, in 1996 'Cistine' has 6 spikes. 'Cistine' comes from a remake of the Stargard cross using Gardalvin 'Errol' with Lone Star 'Mr Scott'. 'Cistine' is an example of the early super production seedlings that are resulting from our breeding program.



Cym. Stargard 'Cistine'

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tion in each species. Of these species only *Cym. tracyanum* has been used much in hybridising and then not as much as some of the later flowering species such as *Cym. iowianum, Cym. hookerianum* and *Cym. eburneum* while *Cym. iridioides* has only been used a few times and *Cym. erythraeum* virtually not at all. Growing at higher altitudes means that these species have a reasonable degree of cold tolerance and we have grown all three species cold under shadecloth in Melbourne. These plants come from monsoonal areas which means that they receive large amounts of rain in the summer and are relatively dry in the winter. To try and duplicate these conditions would mean that plants should receive plenty of water in summer and best kept as dry as possible in winter. We have not had trouble with winter rain but it would be better if you could keep it off. In summary these three species will grow easily with your modern hybrids and like your hybrids will do better with plenty of water in the summer and drier conditions in winter.

Cym. tracyanum has strongly marked flowers with red-brown veins and spots (although the depth of colour and extent of striping and spotting is variable) with a spotted and "hairy" lip. The leaves grow up to 95cm long with spikes up to 130cm long with 10 to 20 flowers up to 15cm across. The flowers are twisted with the petals reflexing backwards. The flowers have a strong perfume and this species can be found in many collections and has been grown in collections for many years.

Cym. iridioides is often found in collections and many references as *Cym. giganteum*. It also has flowers that are veined but not normally as strongly as *Cym. tracyanum* and often with more red colouring. It has leaves of up to 90cm long with spikes up to 85cm long with 7 to 20 flowers up to 10cm across. The lip is flatter, with only short "hairs" and normally more heavily spotted. The flowers are much less twisted with petals which do not reflex strongly as in *Cym. tracyanum* and the lip is not as "hairy" as in *Cym. tracyanum*. The perfume is not as strong and this species is easy to distinguish from *Cym. tracyanum* once both species are sighted.

Cym. erythraeum can be found as *Cym. longifolium* and *Cym. hennisianum*. It has flowers that are again veined but the lip is only lightly spotted and fairly flat with less visible hairs than either of the two species above. The leaves are up to 90cm long with spikes up to 75cm long carrying between 5 and 14 flowers up to 8cm across. The flowers are again twisted with some reflexing of the petals but not to the





Above: *Cym. iridioides*

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*Cym.*Melita Fair 'No. 6'

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same extent as in *Cym. tracyanum*. The most notable difference as well as the smaller size is the width of the petals and sepals. In *Cym. tracyanum* the petals are between 0.8-1.4cm wide while *Cym. iridioides* has a petal width of 0.7-1.0cm. In *Cym. erythraeum* the petals are only 0.5-0.8cm. Similar comparisons with dorsal sepals 1.2-1.9cm for *Cym. tracyanum* and *Cym. iridioides* to 0.75-1.1cm for *Cym. erythraeum*. Hence *Cym. erythraeum* is easily distinguished by its smaller flowers.

In conclusion all three species are similar but easily distinguished from one another and all will grow easily with your hybrids. They add good colour and early flowering and I would recommend that you try to grow all these species as they are quite beautiful.

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Encyclopedia of Cultivated Orchids, Alex Hawkes, Faber and Faber, 1987

What Orchid is That? Alec Pridgeon, Weldon Publishing, 1992

Indian Orchids: Guide II, Udaei Pradhan, 1979.

Stephen Early
60 Lyrebird Drive
Carrum Downs
Victoria, 3201

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Meetings are held on the 1st Thursday of each month (except December, January and February)

Meetings commence 8.00 p.m.

Venue: The Bexley Masonic Hall, Forest Road, Bexley, Sydney, N.S.W.

For further details contact Secretary, Helen Schultz,

1 Cliff Avenue, Peakhurst, N.S.W. 2210 Phone: (02) 5335148

President, Kevin Black, Phone: (02) 5342929

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Meetings are held on the 4th Wednesday of each month (except December and January)

Auditorium open from 7.00 p.m. — Beginners' Group commences 7.20 p.m.

Main Meeting commences 8.00 p.m.

Venue: The Burnside Community Centre, 401 Greenhill Road, Tusmore, Adelaide, S.A.

For further details contact Secretary, Graham Shevlin,

22 Australian Avenue, Clovelly Park S.A. 5042 Phone: (08) 2767652

President, Ross Woolford, Phone: (08) 2807083

THE CYMBIDIUM CLUB OF WESTERN AUSTRALIA

Meetings are held on the 1st Thursday of each month (except January and February)

Beginners' Group commences 7.30 p.m. — Main Meeting commences 8.00 p.m.

Venue: Red Cliffs Hall, Morrison Road, Red Cliffs, W.A.

For further details contact Secretary, Patricia Hatch, Pager No. 016981087 — President, Ron Ker, (09) 3970661 (after 6.00 p.m.) or Ezi-Gro Orchids, (09) 3432761

THE CYMBIDIUM ORCHID SOCIETY OF VICTORIA INC.

Meetings are held on 2nd Tuesday of each month (except January)

Popular Vote commences 7.50 p.m. — Main Meeting commences 8.00 p.m.

Venue: The Conference Centre, Holmesglen College of TAFE, 585 Waverley Road, Glen Waverley, Melbourne, Victoria.

For further details contact Secretary, Kevin Brown,

4 Riviera Street, Mt Waverley, Victoria 3149 Phone: (03) 98081224

President, Ern Kettle, Phone: (03) 5555646

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
NEW SOUTH WALES				
6 April	8.00am-3.00pm	Autumn (Road Stall)	Camden Haven	Lord Street Laurieton
11-13 April 14 April	10.am-7.00pm 10.00am-6.00pm	Autumn	New South Wales	Hall 2, Sydney Convention and Exhibition Centre Darling Harbour
18-20 April	Shopping Centre Hours to 3.00pm Saturday	Autumn	City of Lismore	Lismore Central Shopping Centre Carrington Street Lismore
20-21 April	9.00am-6.00pm	Autumn (Combined Native and Exotics)	A.N.O.S. Newcastle Group	Town Hall King Street Newcastle
27-28 April	9.00am-5.00pm 9.00am-4.00pm	Autumn	Blue Mountains and District	Penrith Garden Barn off Northern Road Orchard Hills
2-4 May	8.00am-9.00pm	Autumn	Port Macquarie	Settlement City Shopping Centre
3-4 May 5 May	9.00am-5.00pm 9.00am-3.30pm	Autumn	North Shore	Catt's Nursery, 237 Marsden Road Carlingford
9-11 May	9.00am-7.00pm	Autumn	Coffs Harbour	Palm Centre Coffs Harbour
9-11 May	Shopping Centre Hours	Autumn	Grafton District	Grafton Shopping World Grafton
9-11 May	Shopping Centre Hours	Autumn (Mothers Day) Show	Ku-Ring-Gai	Westfield Shoppingtown Hornsby
9-11 May	8.30am-5.30pm	Autumn	Tweed District	Tweed City Shopping Centre Tweed Heads South
9-10 May 11 May	9.00am-6.00pm 9.00am-4.00pm	Autumn	Nambucca Valley	Entertainment Centre Ridge Street Nambucca Heads
19 May	10.00am-3.30pm	Autumn	Orchid Glen Nursery	Dungog High School Eloiza Street, Dungog

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
22-24 May	Shopping Centre Hours to 2.00pm Saturday	Autumn	Boolaroo	Westend Plaza Shopping Centre Cowper Street, Wallsend
23-25 May	Shopping Centre Hours	Winter	Hawkesbury District	West Point Shopping Centre Blacktown
30-31 May	Shopping Centre Hours	Autumn	Berowra & District	Cherrybrook Shopping Centre Shepherds Drive, Cherrybrook
30-31 May 1 June	8.00am-6.00pm 9.00am-4.30pm	Autumn	Casino & District	RSL Hall Canterbury Street Casino
30-31 May 1 June	8.30am-5.30pm 8.30am-12 noon	Autumn	Manning River	Manning Hall Taree
8-9 June	9.30am-4.00pm	Winter	Camden Haven	Catholic Church Hall Ocean Drive, Laurieton
8-9 June	9.00am-4.00pm	Winter	Great Lakes	Forster Primary School Head Street, Forster
8 June 9 June	10.30-5.00pm 9.00am-4.00pm	Winter (Annual Display)	Sapphire Coast Orchid Club	Narooma Aquatic Swimming Pool Narooma
10-14 June	Shopping Centre Hours	Winter	New South Wales	Roselands Shopping Centre Roselands
13-15 June	Shopping Centre Hours	Winter	Maitland & Coalfields District	Hunter Mall High Street, Maitland
16-22 June	9.00am-6.00pm	Winter	Eastern Suburbs	Carousel Shopping Centre Bondi Junction
19-21 June	Shopping Centre Hours	Winter	Illawarra District	Crown Central Wollongong
26-29 June	Shopping Centre Hours	Winter	Cumberland Orchid Circle	Westfield Shoppingtown North Rocks Road North Rocks
27-28 June	Shopping Centre Hours	Winter	Blue Mountains & District	Nepean Square Station Street Penrith
27-29 June 30 June	9.00am-5.00pm 9.00am-3.30pm	Winter	Sutherland Shire	Catts Nursery 80 Port Hacking Road Sylvania
Queensland				
5-6 April 7 April	8.30am-4.30pm 8.30am-12noon	Autumn (Orchid & Hibiscus Show)	Bribie Island	Ningi Community Hall Bribie Island Road Ningi
11-12 April 13 April	9.00am-5.00pm 9.00am-3.00pm	Autumn	Sunshine Coast O.S. Caloundra	Caloundra Civic Centre Caloundra
13 April 14 April	8.00am-5.00pm 9.00am-3.00pm	Autumn (Charity Show)	Brisbane	Hamlyn-Harris Pavilion Mt Gravatt Showgrounds
13 April 14 April	8.30am-5.00pm 8.30am-4.00pm	Autumn	West Brisbane Gardens Hall	Mt Coot-tha Botanic Mt Coot-tha
18-19 April	8.00am-5.00pm	Autumn	Emerald Orchid & Foliage	Village Shopping Centre Hospital Road, Emerald
18-20 April	Shopping Centre Hours	Autumn	Mackay & District	Caneland Shoppingtown Mackay
18-20 April	Shopping Centre Hours	Autumn	Southport & Districts	Burleigh West Shopping Centre West Burleigh Road West Burleigh
18-21 April	Shopping Centre Hours	Autumn	West Morton Orchid Group	Ipswich City Square Ipswich
20 April 21 April	10.00am-5.00pm 10.00am-3.00pm	Autumn (Extravaganza)	Atherton Tableland	RSL Hall Main Street Atherton
27 April 28 April	8.30am-5.00pm 8.30am-4.00pm	Autumn	Ipswich	Bundamba State School Brisbane Road Bundamba, Ipswich
2-4 May	Shopping Centre Hours	Autumn	Redcliffe District	Peninsular Fair Shopping Centre Kippa Ring
3-4 May 5 May	9.00am-6.00pm 9.30am-2.00pm	Autumn	Lockyer Valley	Anglican Church Hall Gatton
4 May	Shopping Centre Hours	Autumn	Douglas	Mossman Shire Hall Mill Street, Mossman

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
4-6 May	Showtimes	Autumn	Toowoomba	Toowoomba Showgrounds Glenvale Road, Toowoomba
4-5 May 6 May	9.00am-5.00pm 9.00am-3.00pm	Autumn (Gardenfest)	Darling Downs Orchid Assoc.	Toowoomba Showgrounds Glencale Road Toowoomba
8-11 May	Shopping Centre Hours	Autumn (Westfield Mothers Day Show)	Pine Rivers	Westfield Shoppingtown Strathpine
10-11 May 12 May	9.00am-5.00pm 9.00am-4.00pm	Autumn	Aspley	Community Hall Edinburgh Castle Road Wavell Heights
10 May 11 May	8.30am-5.00pm 8.30am-1.00pm	Autumn	Noosa District Orchid & Foliage	Q.C.W.A. Hall Maple Street Cooroy
16-17 May 18 May	8.30am-5.00pm 8.30am-12noon	Autumn	Bundaberg	Civic Centre Bourbong Street Bundaberg
22-23 June	9.00am-5.00pm	Winter	Townsville	Townsville Orchid Society Hall Pioneer Park, Ross River Road Thuringowa Central
Victoria				
18 May 19 May	9.00am-5.00pm 10.00am-4.00pm	Autumn	Mornington Peninsula	Frankston High School Hall Towerhill Road Frankston
25-26 May	9.00am-5.00pm	Autumn	Maribynong	Maribyrnong Community Centre Randall Street Maribyrnong
1 June 2 June	10.00am-5.00pm 10.00am-4.30pm	Winter	Geelong Orchid & Indoor Plant Club	St John Hall Myer Street Geelong
8-10 June	9.00am-5.00pm	Winter	Lembourne Eastern	Waverley Campus Homesglen College of TAFE 585 Waverley Road Glen Waverley
South Australia				
15 May	8.00pm-11.00pm	Autumn	The South Australian Orchidaceous	Thebarton Reception Centre Cnr August Street & South Road Thebarton
22-23 June	9.00am-4.00pm	Winter	Port Lincoln Orchid Club	Kallinyalla Nursery
Western Australia				
9-10 May 11 May	8.30am-5.30pm 8.30am-9.00pm	Autumn (Display)	Peel Region of WA	Mandurah Forum Shopping Centre Mandurah City
22-25 May	Shopping Centre Hours	Autumn	Mandurah & Districts Orchid Club of WA	Rockingham Shopping Centre
30-31 May 1 June	Shopping Centre Hours to 3.00pm Saturday	Autumn	Wanneroo	Innaloo Shopping Centre Innaloo
New Zealand				
21 April	11.00am-3.00pm	Autumn	New Zealand	Auckland Horticluture of TAFE 2 Great North Road Pt Chevalier Auckland
11 May 12 May	10.00am-5.00pm 10.00am-4.00pm	Autumn	Capital City	Johnsonville Community Centre Frankmore Avenue Johnsonville Wellington
South Africa				
26-28 April	9.00am-5.00pm	Autumn	Cape	Exhibition Hall Kirstenbosch Botanic Gardens Newlands, C.P.
26-30 June	9.00am-5.00pm	Autumn	Northern Transvaal Centre	Sunny Park Centre Pretoria

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Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
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P249 *Phal.* Miva Barbara 'Mignon'. Slightly spotted yellow.
P246 *Phal.* Miva Charme 'Malice'. Did you get this salmon coloured pink before?
P247 *Phal.* Miva Goldissimo 'Froufrou'. Salmon dominant – I saw these plants flowering in France and they are very impressive.

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C212 Via Arcadian Rincon 'Winter Velvet' x Cronulla 'Merric Magic'. Using a soft pink Cronulla.
C213 Valley Knight ('Vanessa' x 'Pearl') "Matthew" x (Winter Gold 'Honey' x Lunara 'Joy') "Yellow".
C214 (Winter Advent 'Poppy' x [Alvin Bryant x Jean Slattery] "McEwins var.") "Lyn) x (Melinga Highbury x Wyanga Elanora) "Meaghan Lee". Meaghan is a concolour.

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JUNE 1996

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Oncidium Sw

Spathoglottis Orchids

BIG CYMBIDIUM FEATURE

Australian Orchid Review



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Oncidium pulchellum – *Photo: Rod Rice.*
See "*Oncidium* Sw" on page 6.

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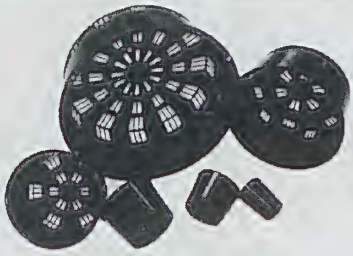
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Articles for publication and consideration should be sent to:

AOR Editor, David Wallace,
14 McGill Street,
Lewisham, NSW 2049
All other correspondence to:
AOR Publisher, Graphic World,
14 McGill Street,
Lewisham, NSW 2049.

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Spath. Parsonii, two different colours of the natural hybrid



Spath. lobbii species



Collection of hybrids



Spath. Parsonii natural hybrid (*plicata* x *vanoverbeghie*)

Spatholottis



Spath. Angelina (Premier x Chrysantha)

In the past the Singapore Botanic Gardens became known as world leaders in the breeding and hybridising of *Spathoglottis*. However in recent years Tom and Delia Hobden of 6 Pendar Street, Ingham, Qld. have amassed a large collection of *Spathoglottis* and have carried out quite extensive operations in the hybridising of the genus.

They have liased with Dr. Tan Wee Kiat of Singapore Gardens to the extent that they have been responsible for the upgrading of the Singapore Collection.

Some of the breeding stock the Hobdens have been working with are:— *Spath. plicata* and varieties *alba* and *aureocallis*, *Spath. duranii*, *Spath. plicata* var *pallidissima*, *Spath. vieillardii*, *Spath. pacifica*, *Spath. tomentosa*, *Spath. chrysantha*, *Spath. vanoverberghii*, *Spath. affinis*, *Spath. lobbii*, *Spath. pubescens*, *Spath.* Parsonii, *Spath.* Penang Beauty and *Spath.* Primrose.

Some of Hobdens creations are shown here for readers appreciation.

The Hobdens are still endeavouring to procure *Spathoglottis aurea* to enable them to extend their hybridising programme and would be very greatful to hear from any grower who could help them in this regard.



Spath. Loretta



Spath. VI (Premier x Primrose)

Oncidium Sw.

by Rod Rice M.A.I.H.

An absolutely wonderful, colourful and often very interesting genus hailing from Central and Southern America, with apporximately 400-500 species. Some books will suggest as many as 600-750 species but it is likely species from other very closely related genera such as *Odontoglossum* H.B.K. and *Cyrtochilum* H.B.K. are still considered to be *Oncidium* by these books.

Most of us would definitely know or be at least familiar with this genus, and perhaps very few would not have an *Oncidium* somewhere in the collection. That is quite understandable when you consider the generally magnificent displays they exhibit, not to mention their ease of culture and the flowers usually lasting 4-6 weeks and often much longer.

The flowers of the species are predominantly yellow and brown, with very few exhibiting the colours pink, purple, green, orange and white.

Flowers can be as small as 7mm across as on *Oncidium hookeri* Rolfe, or reaching up to 7.5cm across on *Oncidium crispum* Lodd. Perhaps bending the rules a little, there are flowers reaching up to 10cm tall and 8-10cm across on what are now known as *Psychopsis krameriana* (Rchb.f.) H.G. Jones and *Psychopsis papilio* (Lindl) H.G. Jones, once well renowned as *Oncidiums* from the section *Glanduligera*.

In fact it is reported that the first flowering of *P. papilio* in 1825 in Chelsea England, is basically what started the sudden interest and craze in orchids amongst the aristocracy in the early part of last century.

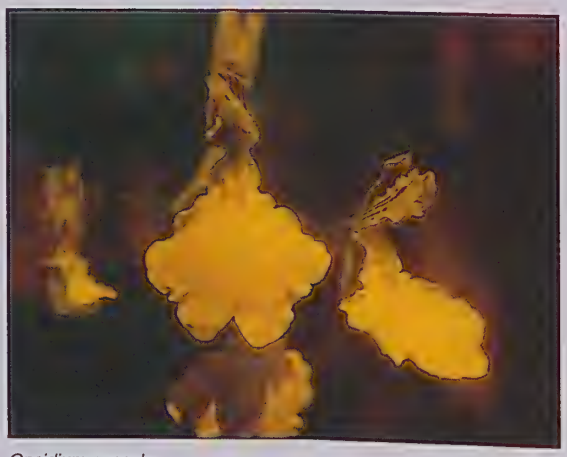
The culture of *Oncidium* generally is quite simple and very easy. The majority like good light 30-50% shade, plenty of moisture while in active growth, humidity, and good air movement is a very critical factor. They tend to be big feeders as well, which will help bring those fantastic displays to epic proportions.

Temperatures tend to be in the intermediate to warm range while actively growing. In fact most thrive in warm temperatures during summer with plenty of water, with a cooler drier rest in winter to induce flowering. Hot to warm summers are not the case for a lot of the cooler growing Andes Mountain type oncids such as *Oncidium nubigenum* Lindl.

I might point out here this culture is not suitable for the equitant oncids in relation to winter temperatures and watering regime. They tend to be in a culture class all on their own from most other *Oncidium*. Perhaps later an article just on the equitants by an experienced grower would be good.

Some books say to grow them (the bulbous Oncidiums) in shady conditions when the new growths are starting and later move them into stronger light when they are reaching maturity. I tried this once with a mixture of hybrids & species but I did not get as many flowers as I would have before. So now I keep most of them hung up high in the bush house all year round and I get the flower size and numbers that I would have normally. This applies to the species that are not grown in the hot house where I can often have more shade, except for the equitants.

But I would like to say that this is what works for me, and I am not saying this is gospel for everyone else. Perhaps in areas where it is a lot hotter and perhaps drier with less humidity, shade would be beneficial during the peak of summer to prevent tissue burn on new and older growths. The obvoius tell tale signs are to watch the leaves and if they start to go too yellow or red move them to a shadier spot.



Oncidium concolor

I have picked 8 species to try and show a bit of a cross section.

***Oncidium concolor* Hooker. 1839.**

Syn: *Cyrtochilum citrinum* Hooker. *Oncidium unguiculatum* Klotzsch. *Oncidium ottonis* Rchb.f.??

This absolutelty beautiful orchid has to be seen in the flesh to fully appreciate its sheer beauty and magnificence.

The raceme 15-30cm long produces up to 12, 5cm long vivid canary yellow flowers in spring or summer. They are scented and last 3-4 weeks. Perhaps not often seen in collections in Australia as it is reasonably rare in the wild, but definitely worth having if the opportunity arises. An easy grower



Oncidium flexuosum



Oncidium forbesii



Oncidium pubes

in cool to intermediate conditions with medium light. With excellent drainage for lots of water in summer, with a dry rest in winter. Occurs as an epiphyte at mid tree level, from the mountain areas of southern Brazil and northern Argentina.

This is the type species for the section *Concoloria*.

***Oncidium flexuosum* Sims. 1821.**

Syn: *Epidendrum lineatum* Vell. *Oncidium haematochrysum* Rchb.f.

Oncidium haematoxanthum Rchb.f.

This climbing epiphyte is from the section *Synsepala*. Probably quite common in collections, but easily grown and flowered. It produces an inflorescence up to 1m long, branching at the top with lots of 2cm long flowers. The petals and sepals are yellow barred with red brown, the lip is yellow and approximately 1.5 cm long. Quite adaptable and grows well in warm to cool conditions with strong light. Due to its habit, it is best grown on an old fence paling or similar with plenty of water in summer. Keep dryish in winter. Occurs in eastern Brazil, Argentina and Paraguay.



Oncidium ornithorynchum

***Oncidium forbesii* Hooker. 1839.**

Syn: *Oncidium crispum var. forbesii* Burb. *Oncidium crispum var. marginatum* Hort.

This species comes from the section *Crispa*. Its erect inflorescence reaching up to 90cm long becomes some what semi pendulous with the weight of the forming flowers. The flowers are a chestnut brown in colour, speckled with yellow and also have a yellow margin. The very showy flowers can reach 7cm across. Any where between 5 and 30 flowers are produced usually in the autumn. Grows well in intermediate conditions with bright light, lots of water while in growth and a dry winter rest. Occurs epiphytically at altitudes between 800-1600m in the upper levels of foggy forests in the Organ Mountains in eastern Brazil. It is also found as a terrestrial in regrowth areas.

***Oncidium ornithorynchum* H.B.K. 1815.**

This beautiful little species is from the section *Rostrata*. A very vigorous compact plant capable of producing 2-3, 30-60cm long branched inflorescences off the same pseudobulb, with masses of 2-2.5cm wide rose-pink flowers in autumn to winter. The flowers are long lasting and highly scented. Very popular because of its ease of culture and prolific flowering habit, and undoubtedly the unusually pink coloured flowers for an Oncidium. Grows well in intermediate to cool conditions with moderate light and moisture the year round. Occurs as an epiphyte at altitudes from 800-1500m in humid forests from Mexico, Guatemala, El Salvador and Costa Rica.



Oncidium pulchellum

***Oncidium pubes* Lindl. 1826.**

Syn: *Oncidium bicornutum* Hooker. *Oncidium pubescens* Duchartre.

An epiphyte from the section *Waluewa* that produces pseudobulbs up to 7cm tall with leaves up to 12cm long. Capable of flowering while still quite small (pseudobulbs 3cm tall). An arching inflorescence of up to 30-60cm long



Oncidium reflexum

can produce many flowers on short branches. The flowers reach 2cm across and are a brownish purple with strong yellow or green transverse barring. Grows well potted or mounted, but must have excellent drainage for its fine roots. It likes moderate light and intermediate temperatures, and plenty of water while in active growth. Occurs in the mountainous areas of Paraquay, and the states of Rio de Janerio and Minas Gerais in Brazil.

***Oncidium pulchellum* Hk. 1827.**

Syn: *Tolumnia pulchella* Raf.

A very beautiful equitant species from the section *Oncidium* or sometimes known as the *Variegata* section, forming clusters of up to 12.5cm tall fan shaped leaves. It is one of the very few Oncidiums that can produce almost pure pink flowers. The raceme can reach up to 50cm long and up to 10-20 pale to dark pink flowers reaching 30mm long with either a white or pink labellum are displayed near the top. On well grown plants it will keep flowering off the same stem sending out more flowers from the internodes on the stem.



Oncidium sphegiferum

Strong light excellent drainage, high humidity and a minimum winter night temperature of 13 degrees C. are its requirements. It will tolerate lower night temperatures during winter, but you must have protection from cold wind and the roots must be absolutely bone dry by night fall. Fertilise regularily while growing to encourage root growth of the new shoots, and while flowering you should use a mixture of bloom booster and nitrogen to ensure the new growths produce strong roots. This species has the largest flower of this section.

Occurs from Cuba, Jamaica, West Indies and Hispaniola.

***Oncidium reflexum* Lindl. 1837.**

Syn: *Oncidium cruentum* Hort. *Oncidium pelicanum* Mart ex Lindl.

Oncidium sauve Lindl. *Oncidium suttonii* Batem. ex Lindl. *Oncidium wendlandianum* Rchb.f.

This species comes from the section *Oblongata*. It is an epiphyte growing at altitudes up to 1500m and forms clumps on the trees sometimes up to 1 meter long. The pseudobulbs reach 8cm tall & 2-5cm wide with the leaves being linear-lanceolate up to 30cm long. The inflorescence is some what straggly and slender growing up to 50-90cm long but often with very few flowers. The flowers reaching up to 3.5-4cm long are yellow with red brown to strong dark brown barring and a vivid yellow lip which has a few red brown spots on the callus. The sepals and petals are strongly reflexed, hence its name. Quite easy to grow in intermediate conditions with medium to strong light and a cool drier rest in winter. Occurs from Mexico to Guatemala, but apparently rare in Guatemala.

***Oncidium sphegiferum* Lindl. 1843.**

This mid tree epiphyte occurs sporadically in primary forest at elevations of up to 1200m, and always in the company of mixed epiphytes and sometimes other Oncidium species such as *Oncidium harrisonianum* Lindl and *Oncidium gardneri* Lindl. The pseudobulbs are broadly oval to round, compressed, growing to 2-3.5 cm tall with a single rigid leaf up to 22cm long and up to 10cm wide. The semi-erect to pendulous inflorescence grows from 50cm to 1.5 meters long and is paniculate with as many as 100 greenish yellow or orange yellow long lasting flowers with chestnut blotching on the basal half of the sepals & petals. The lip is a paler yellow with several chestnut blotches and the obvious side lobes have a serrated lower margin. The callus is large and round, being orange & white and looks like a puffy pom pom. The flowers reach up to 2.5-3cm long. Quite easily grown in a coarse media or on a slab in intermediate conditions with medium to strongish light and a drier rest in winter. This very showy and free flowering species is said to be very rare in cultivation. It is from the section *Pulvinata*. Occurs in south eastern Brazil.

I would like to thank Grant Smith for his contributions to this article.

All plants owned and photographed by the author.

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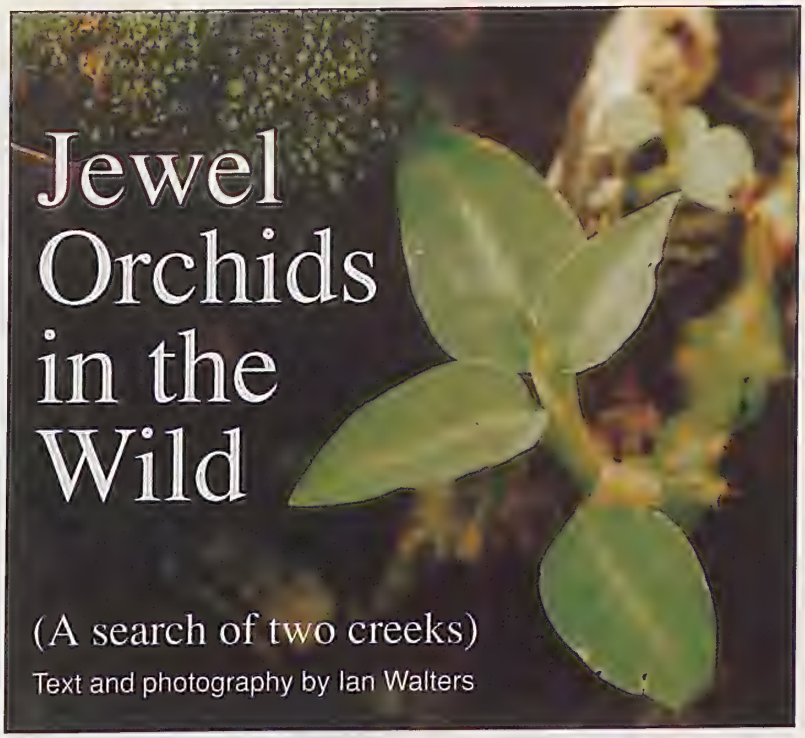
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Rod Rice. M.A.I.H. P.O. Box 21, Dora Creek, N.S.W. Australia. 2264.

Jewel Orchids in the Wild

(A search of two creeks)

Text and photography by Ian Walters



Cheirostylis ovata

As though guarding the portals, large dark green leaves of the stinging tree, gympie-gympie, hung over the little lowland creek. It was dark under the canopy, water trickling down among the rocks of the creek bed, and for the unwary, trailing wait-awhiles raised another barrier.

It was many years since I had been into this creek, and time had changed it. The creek was overgrown with palms and lawyer vine, the climbing difficult, wet and treacherous.

We had come to look for a seldom seen Jewel orchid, a small growing species of the lowland rainforest, that I had found here long ago. The plant consists of a creeping, caterpillar like rhizome, topped with 3 or 4 green leaves, each to about 5 cm long, the centre of the leaf feathered pale green to whitish green.

A tall spike, produced with the new growth, bears small white intricate flowers with a distinctive two lobed labellum. A little gem, hidden away in the rain forest.

In the darkest part of the creek, growing in the moss and leafmould in rock crevices just out of reach of the water, we did find the Jewel orchid. *Cheirostylis ovata*, sometimes called the caterpillar orchid. The species extends from northern New South Wales to far north Queensland, a plant of the rainforests, representative of a genus with about 15 species world wide from Africa to Asia, New Guinea and Australia.

Our second foray was a creek on top of the range, threading its way through rainforest and then down to the drier flanks of the range, where *Casuarina* replaced the rainforest. The creek was rich in ferns, and *Bulbophyllum* species, including the strange plant of *Bulbophyllum evasum*, were abundant, with plants of *Dendrobium adae* and *tetragonum* var *hayesianum* growing in the trees along the banks *Calanthe triplicata* grew in the leafmould on the forest floor.

Deep in the rain forest, miles from human activity, it was a surprise to find an old tin race, cut through the rock bed of the creek, the rocks lined up along the banks like some fortress wall. As visitors to the rainforest, looking for Jewels, we could only contemplate the lives and work of the long ago miners, scratching out a living in the green and wet and almost silent rainforest.

A typical habitat of the Jewel. *Anoectochilus vatesae*, sheltered, ferns and moss and moisture in abundance, but this species was nowhere to be found in that creek.

Further down the creek, in the *Casuarina* forest along the creek banks, were countless plants of *Dendrobium agrostophyllum, Bulbophyllum newportii, Dendrobium speciosum,* and *Dendrobium ruppianum,* the latter even growing almost as a terrestrial in the thick covering of *Casuarina* needles on the ground. In the rock crevices in the creek, out of the water, but where they would be certainly covered by floods, were plants of *Pterostylis hildeae,* a dainty little greenhood. ■

Ian Walters, Burleigh Park, 54 Hammond Way, Thuringowa, 4815.



Den. ruppianum



Den. ruppianum var *ruppianum* – Photo: Ray Robinson

Home Media:

Using Fertilisers and without a pH Meter

by R Smythe MSc

After my recent publication[1], "Simple Flasking" in the *Australian Orchid Review*, I received so much correspondence that I have had to do some work and establish a much more detailed media preparation for the home enthusiast. What I have tried to develop is a method that can be done at home with agar being the only exotic ingredient you would have to purchase. Powdered agar is available in health shops. If you follow the steps anyone will be able to flask orchids at home. The method will be kept as simple as possible and later on you can start experimenting with additives.

Requirements:— Basic kitchen plus agar.

Microwave/Pressure Cooker:—

If you don't use a microwave you can use an oven or a pressure cooker but you will have to increase the agar content as it is unstable at high temperatures and with prolonged heating. I will only deal with microwave[2] as it is so convenient for large numbers of flasks though at times heat resistant infestations may give problems. For small quantities a pressure cooker is more reliable and easier to use. I will emphasise microwave here as most homes have this appliance. Pressure cookers of suitable size are expensive and not often found in the home.

Polycarbonate flasks or glass flasks with plastic lids:—

These should be checked for poor seals by shaking them with a small amount of water. Any splashing out indicates they are no good. An even better test is to pour boiling water into the flask and invert it. If the bubbles do not come from the breather, as it cools, you have problems. Whether or not you put breathers in is up to you. They are not advisable for germination but could save one reflasking when used for growing on. No metal lids as these are difficult to handle in a microwave.

A saturated solution of gypsum:—

Pour boiling water into a two litre milk bottle containing half a cup of gypsum. When cool discard the liquid and replace with more boiling water. Every time you take some solution out, top it up with water so it is ready for the next time. Use nil for germination 100ml for replate and 300ml for reflask.

Mineral salts:—

Aquasol, Manutec Bloom Buster and Manutec Orchid Mix have been tested here. You should be able to use any other form of a complete solid fertiliser. Use two to three grams per litre. If you place the fertiliser on a tea spoon and tap it down with the flat blade of knife till no more falls off you will have approximately 3g, the currently supplied spoon with Bloom Buster delivers 2.3 to 2.4g using the same method. I would recommend that the home grower blend his fertiliser finer in a blender and keep it in a screw top jar. For germination "Bloom Buster" performed the best with aquasol needing gypsum to work. Manutec Orchid performed the best when reflasking.



A teaspoon of fertiliser smoothed down with a knifeblade.

Sugar:—

For a germination mixture use 5g, for a replate use up to 10g and for reflask 20g to make a litre of medium. Using a teaspoon this would be about 2, 8 and 12 flat teaspoons.

Agar:—

6g (3 flat teaspoons) per litre. If you add potato or banana you reduce the amount of water in the media so reduce the agar proportionately. Brands of agar vary so you may need to experiment to get the texture right.

Red Cabbage as a pH indicator:—

If you own a pH meter or can use pH papers reliably the cabbage will not be necessary. Chop up 50g about one cup of red cabbage. pH must be adjusted before the banana or potato is added otherwise you will not be able to observe the colours.

Diluted Disinfectant:—

Dilute a suitable quaternary ammonium disinfectant (Alginox, MYO or Physan) one part to two hundred parts of water. Use one ml of this per litre of medium.

Coconut water:—

I would suggest coconut milk be added to the germination mixture (100 ml). Germination times can be reduced by months with this additive.

Banana:—

For the replate and the reflask add one banana (100g).

Potato:—

For the reflask only (100g). Any more potato turns the agar into a glue. You can chop up more potato and boil it and add the water, but no more than 100g of the tissue.

Method

Thoroughly clean the glassware checking the inside of the lids for remnants of old media. This is where most problems originate. Soak over night in an esky containing 1 ml per litre of a quaternary ammonium disinfectant. Invert to drain before use.

Place the chopped cabbage in 300 ml of water and boil to extract the colours. Discard the cabbage and add the mineral salts and the sugar to the liquid. Stir the agar into 300ml of cold water and add it to the above solution with vigorous stirring. Make up to approximately one litre. Place in the microwave and just boil (10 min). Stir to prevent settling of the agar. Allow to cool until still hot but not too hot for the hand. Add one millilitre of the diluted disinfectant (20 drops from an eye dropper). Adjust the pH to between 4.8 and 5.2 using vinegar (with the brand I use this is about 3 ml). This is where the cabbage colour comes in. As the pH changes the colour changes from an indigo to a more pinkish red as the vinegar is added. Watch for the removal of the purple hue. When that is just gone the pH is right. You will need to work in a bright light or with a white backing in order to see the colour changes. Keep some small samples of the solution in glasses as you go along to see if there is a change occurring. First up this is difficult

and you might like to borrow a pH meter for this occasion. pH must be adjusted before adding any banana or potato as these interfere with visibility.

If you intend working with very green seed (embryo) it would be better to use the antioxidant citric acid to adjust the pH. Be aware that too much citric acid can induce calcium deficiency. Vitamin C is another good additive that does the same job. An exacting pH adjustment is only important for the germination medium.

When you think it is right put a small sample in the freezer to check for sure that it is going to set. If it usually sets with the agar you have used before but does not set this time it is too acidic. Similarly if it is unusually hard it is too basic. Once more bring to the boil and dispense while hot. Dispense into flasks using a funnel. Don't spill anything on the outside of the flask. Put the lid on loosely and allow it to set. The replate and reflasks are usually ready for use at this stage. The disinfectant will hold mild infestation at bay. For the germination media or if you want more reliable sterility, leave the lids loose until the condensate has gone from the lid and sides of the flasks then heat sterilise.



Variations in colour of a cabbage extract when the pH is changed

Sterilisation of Germination Flasks:—

Microwave is an imperfect method for sterilisation but at this stage without the organics it is rare that the flasks are not already sterile. Due to the soaking in disinfectant and heating of the replate and reflask media, the initial low level contamination is usually removed rendering the media sterile or bacteriostatic. It is still necessary to resterilise the flask above the level of the media. Flasks carrying organics need a second sterilisation procedure anyways. I find this is best done by re-irradiating with microwaves. To do this loosen the lids and irradiate the whole one litre of prepared flasks until the first bubbles appears. If organics are present further boiling may be required[2]. When cool close the lids. You don't want the lids to pop so it is necessary to take care when heating. Before you use the flasks of media irradiate them one more time. Just liquefy and swirl them and you will quickly be able to detect contaminated flasks. The procedure is very simple and the biggest problem is the wife.

"You've not got your orchid stuff in the microwave again?"

I have found that simple media (media containing no organic additives other than agar) are usually completely sterilised with the first heating. With the second treatment you will now be killing isolated bugs on the walls and under the lids. This will work best if the lids and walls are dry otherwise the bugs won't get hot enough to be killed by the radiation. With the simple media this method rarely fails.

If you intend working with organics, like bananas, strain out the solids. I know this goes against research findings[3], but with this method of sterilisation lumps won't sterilise. For instance microwave sterilisation does not function when contaminated carbon is added. The carbon has to be presterilised with heat in the oven. Put the date on your batch of medium and don't use it for a week.

As mentioned above, it is a good idea to remelt your sample just before use. This removes the scum, overcomes dehydration at the surface and possible infestation can more easily be seen, especially the rarer ones occurring within the agar as they clump on heating. As a comparison egg white is much more easily seen when poached. If you intend making complex formulas with ingredients possibly carrying high levels of, or resistant organisms (potato is such an ingredient) you should consider getting a pressure cooker. For germination media, the method as set out above, using the microwave will actually be better than alternative methods as the heating is less severe on the nutrients.

For the Serious Experimenter

The above method is a modification of an even milder method I have developed for my research[4] where I sterilise media with out much heating and concomitant nutrient degradation. This is very important research and I am continuously refining the method but it should be published within the next twelve months.

As a reflasking media all the salt mixtures mentioned above have proven satisfactory for *Phalaenopsis, Dendrobium, Sarcochilus* and *Renanthera* species.

As a germinating media Phalaenopsis and Dendrobiums have shown excellent germination in the "Bloom Buster" formulation with and without gypsum. "Aquasol" formulation has worked for replate but without gypsum was unsatisfactory for germination. Plants germinated well in aquasol when 300 ml/l of the gypsum solution was added. The protocorms produced went bright green then died. I have since calculated that 100 ml of gypsum would have been better. If you use gypsum in your germinating media be prepared to reflask early. It is obviously too rich at the level I used (300 ml/l). To support a large amount of plant material with these salt mixtures as well as with commercial salt mixtures a large amount of organics like banana needs to be added.

Aseptic techniques:—

Later I will write on this[5]. If you have no sterile box or laminar flow, work in a room with no air movement (keep windows and doors closed). Keep as still as possible and scrub up before starting. Two places you may not have thought of as a working area are in a presterilised and still warm oven or in front of the hot plates with the plates all turned on. What you are creating is an updraught so dust won't settle into your flask. Instruments should be sterilised chemically and finally by heat. I have a friend who works very quickly in the open over a small plastic mat. The surface of the mat is swabbed down with bleach. He has a remarkably high success rate.

1. Smythe R., "Simple Flasking" *Australian Orchid Review* October, p12 (1994)

2. Smythe R., "Microwave Media Sterilisation" *Australian Orchid Review* December pp17-19 (1990)

3. Arditti J., "Germination of Orchids on Banana Fruit Tissue and some of its Extracts" *American Orchid Society Bulletin* 37:112-116

4. Smythe R., "Flasking Orchids Using Chemical Sterilisation of the media" in print.

5. Smythe R., "Sterilisation of Orchid Seed Coat" in print.

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New *Stanhopea* species 'Wilton'

New *Gongora* and other Stanhopeinae species

by Rod Rice M.A.I.H.

Since writing the introductory article on the *Gongora* I have received some letters expressing different comments and compliments. But one certain comment or question which came up quite a bit was the listing of new species from this genus and other closely related genera etc.

The flowers of the *Gongora* are highly variable in colour. Also some highly variable in form. To reinforce this I have included four slides of four different clones of *Gongora plieochroma* Rchb.f. But also the authentic identification of the *Gongora* and other *Stanhopeinae* species must be based on structure, and those that are claiming to have new species based on colour are not only kidding themselves but they are falsely educating others.

All of the 53 species of *Gongora* have been thoroughly documented and described and in fact, Dr Rudolf Jenny has an excellent book called, *Monograph Of The Genus Gongora Ruiz & Pavon*, (available from the American Orchid Society book dept, or possibly through Orchidaceous Books) displaying many colour & black & white photos, line drawings and all new species are described in this book. Plus many other aspects of the genus, pollination ecology, a key to the species etc.

So therefore with the availability of this book on the *Gongora*, and botanists such as Dr Rudolf Jenny (*Gongora* and *Stanhopea*) and Dr Gunter Gerlach (*Coryanthes*) who are specialising in these areas of *Stanhopeinae*, there is absolutely no reason why these nurserymen can not put a name to these supposed new species no matter what their colour.

There is a possibility of a 54th *Gongora* species in the air but there is still a lot of research and investigation to be carried out and it may in fact prove to be a natural hybrid.

The plant in question was a jungle collected plant from South America some 25 years ago and was imported under the name *Gongora bufonia* Lindley. The plant belonged to a now elderly man for all that time until he had to sell his collection a few years ago due to ill health.

The plant has been flowered twice since, and the new owner realising that it was not *Gongora bufonia* photographed it and recently sent pickled flowers to Dr Jenny for identification.

This is part of what Dr Jenny has said about it so far. "If I knew that it is not a hybrid and that it is from South America I would call it a new species. The form of the hypochile of the lip is entirely aberrant from all other from the section *Quinquernervis*".

I know for a fact that seed from this plant has not been made available to any

individual or nurseryman, as I happen to be the new owner. Until we know 100% for sure whether it is a new species or natural hybrid it wont be at this stage made available.

Unfortunately in the past and still today many a keen orchid grower or horticulturalist (including myself)have been caught out buying flasks or plants labelled e.g *Gongora* spp Rare unidentified, or *Laelia* spp, or *Paphiopedilum lowii*, and or many other genera. Growing them on and flowering them to find they are something they already have, or not even from the same genus. Or a blatant hybrid, particularly with the Paphs.

Sadly though it would appear the quick dollar is of more importance to some, rather than the correct conservation and education of species, and or supplying a quality product that is authentically labelled.

Coryanthes is another of the genera asked about, and as far as I know, there are no new species. There are 44 species of *Coryanthes*, all have been thoroughly documented, and 6 of these are believed to be lost to science. A book by Gunter Gerlach & Rainer Schill called, Die Gattung Coryanthes Hook. is available from Germany and documents most of the species concerned, with line drawings & black & white photographs, synonymous names etc.

Coryanthes are extremely rare not just in cultivation but also in the wild. For approximately every 200-300 *Gongora* or *Stanhopea* plants found in the wild you may be lucky enough to find one *Coryanthes*. They are incredibly rare.

The perfect example is *Coryanthes feildingii* Lindl only one plant of this species has ever been found, and this species was discovered and described last century in 1848.

Stanhopea is the other genus asked about. In the past, excellent articles have been presented by this magazine on *Stanhopea* by Mr Barney Greer, telling us some culture aspects of the species and discoveries in his collection. Also my good friend Roger Kramer recently did an excellent series of articles on this genus in another Australian orchid magazine. Making the facts of their status quite clear.

We now know there are presently 57 species, numbers 56 & 57 are still being named by Dr Jenny and with 6-7 others being investigated for species status. The first of the two still being named, was discovered in Mexico a couple of years ago. The second was flowered in the collection at Wilton, a plant collected by York Merideth some 15 years ago.

Both of these new species of *Stanhopea* and many of the other already recognised



Four clones of *Gongora pleiochroma*

species are in flask authentically labelled, and they will be or presently are, being made available to collectors and nurserymen.

Further Reading:

Dressler. R.L. 1993. *Phylogeny and Classification of the Orchid Family.*

Dressler. R.L. 1981. *The Orchids: Natural History and Classification.*

Gerlach. G. & Schill. R. 1993. *Die Gattung Coryanthes Hook.*

Greer. B. 1993. Rarely Seen *Stanhopea florida* in Flower. *Australian Orchid Review* Vol 58. No.4

Jenny. R. 1993. *Monograph of the Genus Gongora Ruiz & Pavon.*

Kramer. R. 1995. Ghosts, Goblins and Dragons. A Photographic Introduction To The Genus *Stanhopea*. Parts 1-5. *Orchids Australia*. Vol 7 No.2 - Vol 7 No.6

Pridgeon. A. 1992. *What Orchid Is That?*

All Gongora plants owned & photographed by the author.

New Stanhopea spp Wilton, owned and grown by Roger Kramer and photographed by Salvador Castelo.

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N.S.W. Australia. 2264.

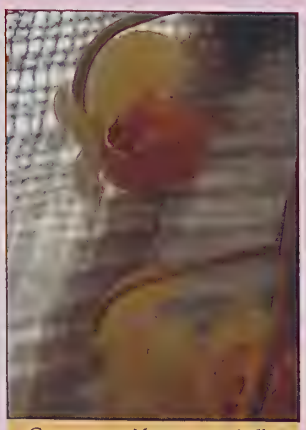


Gongora new species or natural hybrid?

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- *Promenea rollinsonii*
- *Bulbophyllum ambrosia*
- *Phragmipedium lindleyanum*
- *Gongora truncata*
- *Paphiopedilum fairianum* x *sib*
- *Stanhopea maculosa* var. *aureum*
- *Rossioglossum grande*
- *Paphiopedilum druryi x sib*
- *Cymbidium lowianum concolor*
- *Oncidium divaricatum*
- *Paphiopedilum liemannianum* x *sib*
- *Maxillaria picta* var. *semi concolor*
- *Pabstia jugosa*
- *Angraecum didieri*
- *Phalaenopsis rosenstromi* 'Qlander' Am
- *Stanhopea florida*
- *Graphorkis lurida*
- *Pyschopsis krameriana*
- *Aeranthes grandiflora*
- *Laelia angerei*
- *Masdevallia maculata*
- *Phragmipedium boisserianum*
- *Ranageris amaniensis*
- *Paphiopedium kolopakingii* x *sib*
- *Bulbophyllum membranifolium*
- *Stanhopea ospinae*



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AOR129

Rare & Miscellaneous Species: Rare & Miscellaneous Species: Rare & Miscellaneous Species: Rare & Miscellaneous Species:

Vanilla planifolia

Vanilla planifolia is the only orchid which has been used as the basis of an agricultural industry. It is well known the source of vanilla essence. But it is also a horticultural plant of some considerable appeal and is one of the few climbing orchids. It can grow robust stems to 25 or more metres long climbing up trees or, in cultivation, over bush house walls. The stems are about as thick as a finger and branch occasionally. Fleshy roots are produced opposite the leaves with which the plant attaches itself to the substrate. The leaves are succulent in texture, up to 20 centimetres long and about 4 to 6 centimetres wide. Some forms have variegated leaves with yellowish markings.

The flowers are borne in Spring in the Australian tropics. They are about 6 centimetres long and are a yellowish green and do not open widely. They are produced successively from a short stem so that only one or two are open at one time. The flowering continues for about a month, but each flower is open for only a day or two. the seed pods are of special interest as they are the source of vanilla essence. The pods (known as "beans" in the trade) grow up to 15 centimetres long. Outside the natural habitat the flowers must be artificially pollinated to set pods. When the pods mature and open the seeds are in a black glutinous substance and there is an overpowering smell of vanilla. The seeds are of interest, being one of the largest of orchid seeds and having a hard seed coat.

The plants are very easily propagated by cuttings of about four or five nodes which can be established in a pot of cymbidium type mix. They grow best in shade and in warm to hot humid conditions and must be given something to grow over. Plants usually do not flower until they reach three or four metres long, but once flowering starts, they flower regularly.

Vanilla planifolia occurs naturally in central America and the northern part of south America. It is a plant of tropical lowlands and does not do well at altitudes above 1000 metres. In its natural habitat it grows in rainforests and climbs to the canopy.

Vanilla was quickly recognised by early European explorers in the New World as a plant of interest for the spice trade. Several attempts were made to introduce it into Europe, some possibly as early as 1510, but it seems it was not successfully cultivated until 1807 and some crops were harvested around that time. Climate and the need for hand pollination were problems to an industry becoming established in Europe. The vanilla industry has been affected in recent years by synthetic products.

The distribution of the genus *Vanilla* is of interest as it occurs in Asia, Africa, South America and the Pacific islands. This is one of the most widespread of orchid genera yet it has seed that are just about the heaviest and least dispensable amongst the orchids. *Vanilla* and its relatives are usually regarded as one of the more primitive groups of orchids and the distribution may represent relics of an ancient group that was dispersed before the continents reached their current positions.

Australia has no species of *Vanilla,* but the saprophytic *Pseudovanilla foliata* and *Erythrorchis cassythoides* are closely related, the former species sometimes producing small leaves and looking very like a *Vanilla.*



Further reading

Childers, N.F., Cibes, H.R and Hernandex-Medina, E. (1959) Vanilla — The Orchid of Commerce in C.L. Withner *(ed) The Orchids — A Scientific Survey.* pp 477-508. The Ronald Press, New York.

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Time for Change

by C.D. Moulton

This will be presented in an unusual form.

It is about modernising the way registration of orchid hybrids is handled and to emplace a system that is not so badly dated as what is used today.

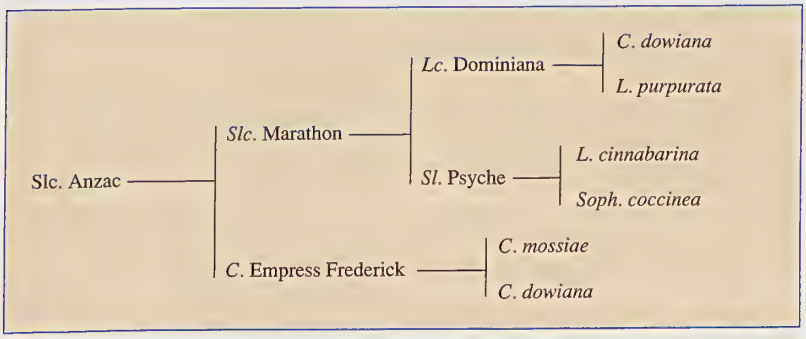
There are various methods now employed, but the standard form has not been changed for almost a century.

It is time the process was brought into the computer age. We need a standard that is easily used, that supplies the necessary data at a glance, and that lends itself to modern technology.

This is a suggestion. No more.

Look over the chart. See if it is clear before looking at the use instructions to follow. Compare it to the old method.

The tree chart, presently used:



The proposed method:

Slc. Anzac: *Slc.* Marathon x *C.* Empress Frederick

Slc. Marathon: *Lc.* Dominiana x *Sl.* Psyche

C. Empress Frederick: *C. mossiae* x *C. dowiana*

Lc. Dominiana: *C. dowiana* x *L. purpurata*

Sl. Psyche: *L. cinnabarina* x *Soph. coccinea*

The use of the idea:

Please briefly study the chart below. See if you can understand it without the explanation that follows:

A suggestion

It's about time something more workable was initiated into the classification process for orchids.

As you can see, the examples of charting move toward such a simplification. The old circle chart would take about 20

Registrant: Chadam/Moulton
Month/day/year
Classification: *Laeliinae*
Brassolaeliocattleya
Proposed name: *Blc.* xxxxxxx
Blc. Don De Michaels 'Razzamatazz' X *Blc.* Zooo 'Candy Apple'

Blc. xxxxxxx: *Blc.* Don De Michaels X (ur/prp) *Blc.* Zooo
Blc. Don De Michaels: *Blc.* Fleur de Lys X *Lc.* Oakland
(ur/prp) *Blc.* Zooo: (ur)A X *Lc.* Luzcleta
Blc. Fleur de Lys: *Lc.* Helen Wilmer X *Bc.* Imperialis
Lc. Oakland: *Lc.* Buccaneer X *Lc.* Mary Rose
(2)(ur)A: Chocolate Drop X *Blc.* Ann Kimi
Lc. Luzcleta: *Lc.* Lisa Ann X *Lc.* Rising Sun
Lc. Helen Wilmer: *Lc.* Gen. Maude X *Lc.* Wellsiana
Bc. Imperialis: *Bc.* Cliftonii X *C. mossiae*
Lc. Buccaneer: *Lc.* Cavalese X *C.* Dinah
Lc. Mary Rose: *Lc.* Queen Mary X *Lc.* Rosalind
* *C.* Chocolate Drop: *C. guttata* X *C. aurantiaca*
Blc. Ann Kimi: *Blc.* Sunset Bay X *C.* Chocolate Drop
Lc. Lisa Ann: *Lc.* Amber Glow X *Lc.* Waianae Sunset
Lc. Rising Sun: *C. elongata* X *Lc.* Waianae Sunset
Lc. Gen. Maude: *Lc.* Rubens X *C.* Hardyana
Lc. Wellsiana: *C. trianaei* X *L. purpurara*
Bc. Cliftonii: *Bc.* Digbyano-mossiae X *C. trianaei*
Lc. Cavalese: *Lc.* Lustre X *C.* Fabia
* *C.* Dinah: *C.* Dupreana X *C.* Elvina
Lc. Queen Mary: *Lc.* Lustre X *C.* Peetersii
Lc. Rosalind: *C. trianae* X *Lc.* Dominiana
Blc. Sunset Bay: *Blc.* Llewellyn X *Lc.* Waiaenae Sunset
Lc. Amber Glow: *Lc.* Derna X *Lc.* Anne Walker
* *Lc.* Waianae Sunset: *Lc.* Dorothy Frief X *Lc.* Mysedo
Lc. Rubens: *L. pumila* X *C.* Hardyana
* *C.* Hardyana: *C. dowiana* X *C. warscewiczii*
~ *Bc.* Digbyano-mossiae: *B(Rhyn). digbyana* X *C. mossiae*
* *Lc.* Lustre: *Lc.* Callistoglossa X *C. lueddemanniana*
* *C.* Fabia: *C. dowiana* X *C. warscewiczii*
C. Elvina: *C. schilleriana* X *C. trianaei*
C. Peetersii: *C.* Hardyana X *C. labiata*
Lc. Dominiana: *C. dowiana* X *L. purpurata*
Blc. Llewellyn: *Bc.* Minerva X *Lc.* Goldfish
Lc. Dorothy Frief: *Lc.* Princess Margaret X *C.* Dinah
Lc. Mysedo: *Lc.* Mrs. Medo X *Lc.* Mysia
Lc. Callistoglossa: *C.* warscewiczii X *L. purpurata*
Bc. Minerva: *Bc.* Mrs. J. Leemann X *C. dowiana*
* *Lc.* Mrs. Medo: *Lc.* Luminosa X *C.* Venus
Lc. Nuggett: *Lc.* Canberra X *Lc.* Mrs. Medo
Lc. Carmencita: *Lc.* Luminosa X *C. dowiana*
Lc. Goldfish: *Lc.* Goldfinch X *C.* Sylvia
Lc. Princess Margaret: *Lc.* Profusion X *C.* Clotho
Lc. Mysia: *Lc.* Senate X *Lc.* Sylph
~ *Bc.* Mrs. J. Leemann: *B(Rhyn). digbyana* X *C. dowiana*
* *Lc.* Luminosa: *C. dowiana* X *L. tenebrosa*
* *C.* Venus: *C.* Iris X *C. dowiana*
Lc. Canberra: *Lc.* Litana X *C.* Venus
Lc. Goldfinch: *Lc.* Warnhamensis X *C. dowiana*
C. Sylvia: *C.* Fabia X *C. dowiana*
Lc. Profusion: *Lc.* Serbia X *C.* Hardyana
C. Clotho: *C.* Enid X *C. trianaei*
Lc. Senate: *Lc.* Orion X *C. labiata*
Lc. Sylph: *Lc.* Luminosa X *C. warscewiczii*
C. Iris: *C. bicolor* X *C. dowiana*
Lc. Litana: *Lc.* Thyone X *C.* Sibyl
(8) *Lc.* Warnhamensis: *L. cinnabarina* X *C. trianaei*
Lc. Serbia: *Lc.* St. Gothard X *C.* Hardyana
* *C.* Enid: *C. mossiae* X *C. warscewiczii*
Lc. Orion: *Lc.* Haroldiana X *C. dowiana*
Lc. Thyone: *Lc.* Ophir X *C. dowiana*
C. Sibyl: *C.* Iridescens X *C. dowiana*
Lc. St. Gothard: *Lc.* Gottoiana X *C.* Hardyana
Lc. Haroldiana: *C.* Hardyana X *L. tenebrosa*
Lc. Ophir: *C.* dowiana X *L. xanthina*
C. Iridescens: *C. bicolor* X *C. eldorado*
Lc. Gottoiana: *C. warneri* X *L. tenebrosa*

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AOR 131

lines for *Slc.* Anzac, the tree chart 11 lines, and the Chadam Chart 5.

If we were working with simple crosses, such as *Slc.* Anzac, there would be no real point, except for the easier layout for the printers. What about modern hybrids, particularly those multi-generic crosses among *Sarcanthiinae* and *Laeliinae*?

I have used the method on a cross I have in flask at the time and have explained afterward how simple I find it to be, and what each symbol or variation means.

Note that this is a three-page chart.

Imagine how large a tree chart of the cross would have to be.

Consider that a circle chart would take up a whole wall!

There are those among us who want to trace the entire family history of a given plant before using it in a cross. We make such a chart of each cross we make. It is a definite aid.

The home grower will only be interested in the immediate parents of a cross, but many others will need that history. This is a suggestion to make such data easily available.

It also leaves unlimited possibilities for adding pertinent information for individual concerns.

You will note the chart takes more than two full pages, even single-spaced. Imagine what a tree chart of THAT would look like.

Also note: a cross used more than once is only listed once. This saves a tremendous amount of space in these more complex crosses we're working with today. Consider how much space a cross between this one and, say, *Blc.* Toshie Aoki — which also takes more than one page — might be!

In the above chart, *Lc.* Wianae Sunset is used three times. Following it as a single cross chart takes 27 lines. NOT including the things, such as *C.* Hardyana and *C.* Enid, that are used more than once in ITS geneology. We have saved more than sixty lines on this one example!

Of course, the two will share some parentage along the way, but the cross would still list at more than two pages.

Taking the various features in order, you will note that the standard information is listed before the chart begins.

The cross is listed, followed by a colon(:), then the parents are listed on the same line.

The parents are then listed in order of appearance and are inset two spaces from the preceding parent(s).

Information is inserted in the line in parenthesis (ur). This means that parent was unregistered at the time the chart was made. (ur/prp) would mean it is unregistered, but that registration is proposed under the name used. (As it is necessary to register all parents to obtain the registration of a new hybrid.)

(2) indicates the second generation is being listed at the page break. To continue insetting two spaces would run the lines off the side of the paper if it wasn't returned to more practical configuration, thus the charting is so listed and returned to the third space from the left margin at the start of page two. The two-space insetting is continued from that point on page two. The third page is needed, a four-space inset would be used, such as the (8), to list the generation at the page break.

(Rhyn), for *Rhyncholaelia,* informs there is another accepted genus classification of *B. (Brassavola).*

Species names are italicized.

Underlining is a variable data separation device. In this case, it indicates a parent that has more than an 80% success rate in later generations as much as four generations removed.

* Astericks indicate the same parent is used in other crosses to follow in the chart.

~ is another variable information device. In this case, it indicates direct infusion of *B(Rhyn). digbyana.*

Standard symbols, such as +, #, @, etc. could be used for individual data indications and would vary with the chart. For such charts saved to disk, one could use a [forward search] mode to quickly locate and list all data following a particular symbol.

This is the method I use in-house. It is simple, saves space and time, and can be deduced with little or no instruction. It is user friendly to today's computers, word processors, and printing methods.

Considering that many printers today work with colours, the more important crosses within the chart could be listed in colour variations, expanding the available data exponentially!

This is presented as a suggestion. There is a great need of a standardised charting method. The necessity will grow steadily as time passes and hybrids become more complex.

If not this, it's about time we do SOMETHING!

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

American Orchid Society 75th Anniversary

PALM BEACH Florida — The American Orchid Society celebrated its 75th anniversary with a black-tie dinner dance featuring elaborate arrangements of orchids donated by growers around the world.

The gala, held March 2 at the Henry Morrison Flagler Museum, represented one of the largest displays of cut orchids seen in this country in many years, said Ned Nash, the American Orchid Society's director of education and conservation.

Thousands of orchids cascaded from urns, adorned a courtyard fountain and graced iron railings throughout the opulent, Gilded-Age estate. Palm Beach floral designer Tom Mathieu, who donated his talents for the event, also combined orchids with twigs, branches and mosses to create natural studies that served as unique centerpieces for each table.

"Cut orchid arrangements of that scale are not often possible because rooms usually are not big enough to accommodate them," Nash said. "Tom Mathieu did a fabulous job of scaling the displays to the rooms. These were the best orchid arrangements I've seen."

Orchids were donated by growers from around the United States, Japan, Singapore, Thailand, England, Holland and Colombia.

"We were extremely fortunate to have the time, effort and talents of so many people — literally from around the world — as well as a place with such historic significance and elegance as the Flagler Museum," said Lee Cooke, executive director of the American Orchid Society.

At the gala, the society unveiled "The Elizabeth Taylor" orchid chosen by a select committee of orchidists as being closest in color to the actress's celebrated eyes. The *Laelia ancets* var. *Veitchiana* was noted by the orchidists for its exceptionally blue color.

Bottles of Miss Taylor's "White Diamonds" fragrance were placed at each table as favours.

As guests entered the museum through its vast marble hall, they had a chance to pluck a stone from a "diamond bowl" of cubic zirconia mixed with quarter-carat diamonds. A special device revealed whether theirs was a real diamond.

An auction featured items such as a connoisseur's dream collection of orchids, a collection of rare vintage French Bordeaux, the opportunity to have a new orchid hybrid named after the person of one's choice, tickets to the Olympics gymnastics finals, tickets to the Kentucky Derby, budded orchids for every month of the year, a malachite necklace designed by Paloma Picasso for Tiffany & Co., a 1930s 25-cent slot machine from the legendary Piping Rock Club in Saratoga Springs, New York, and much more.

"We wanted to have a very special celebration, not only to commemorate our diamond anniversary in a way befitting this important organisation, but also to create greater awareness of the American Orchid Society's role as a local and global leader in the areas of education, research and conservation," said Terry Williams, who served with Donna Craig as gala co-chairmen.

The American Orchid Society is the world's largest and oldest specialised horticultural organisation. Now based in West Palm Beach, the society boasts a membership of 30,000 worldwide.

Serving as national honorary chairman for the gala was Jane Grace.

International honorary chairmen were the Earl and Countess of Mansfield, Lord Roger and Lady Christine Skelmersdale, and the Honourable Alasdair and Mary Morrison.

The Earl of Mansfield, a patron of the Scottish Orchid Society, was active in the Fourteenth World Orchid Conference. Lady Skelmersdale, who with Lord Skelmersdale founded Broadleigh Gardens in Taunton, is very active in the Royal Horticultural Society and writes and lectures on gardening. The Honourable Alasdair Morrison serves as chairman of the Royal Horticultural Society's Orchid Committee and of the World Orchid Conference Trust.

Honorary vice chairmen were Yoshiharu Fukuhara, one of the world's preeminent orchidists and owner of Shiseido; Makoto Hanajima, owner of Hanajima's Orchids in Japan and a partner in Cal-Orchid; Sherman Adler, Wynne S. Ballinger, and Kit Pannill, all of the Horticulture Society of South Florida; Diane S. and William G. Brown Jr; Edith and F. Eugene Dixon; Beatriz and George E. Ford; Robert M. Grace; West Palm Beach Mayor Nancy M. Graham; Enid A. Haupt; Mrs. Henry J. Kaiser Sr.; Betsy and Michael Kaiser; Delray Beach Mayor Thomas E. Lynch; Chandler C. Mashek; Betsy Matthews; Palm Beach County Commissioner Mary McCarty; Lorraine McLellan, of Rod McLellan Co.; Patricia and David B. Robb Jr.; actress and orchidist Jill St. John; Marion and William A. Stewart, of Stewart-Braemar Inc.; and Lillian Jane Volk.

Major funding to help underwrite the gala came from SunTrust, South Florida.

● Congratulations and best wishes on this exciting milestone from the publishers of the *Australian Orchid Review.*

Charity Orchid Spectacular

The North Moreton Queensland Orchid Council Inc. will hold their Charity Orchid Spectacular Show 1996 at Mt. Cool-tha Botanical Gardens Auditorium.

Show dates are June 28th and 29th from 9.00a.m.-5.00p.m., Sunday 30th 9.00a.m.-4.30p.m. in support of the Cystic Fibrosis Association — Northern Branch, helping to fight lung disease in children.

An attractive point among the many Orchid and fern displays will be the Cystic Fibrosis stall with beautiful hand made garments.

Proceeds from the Charity Show will be presented at the dinner on 17th August at the North Brisbane Football Club.

For further details contact Show Secretary, Ruth Ozanne, 105 Bowman Parade, Bardon, Qld. 4065.

Floriade — It's a Celebration of the Arts!

Spring is a time to celebrate, and with this year's theme *Floriade Celebrates the Arts*, that's exactly what we plan to do. The 1996 Floriade will be thirty days full of fun, entertainment and spectacular floral beauty. As part of this year's event there will be street performers, musicians, dancers, sculptors, painters, poets and storytellers throughout the park. From 14 September to 13 October Commonwealth Park Canberra will become a canvas to the horticulturists' palate of colourful flowers. You will see a recreation of some of the world's most famous paintings and literary masterpieces. Floriade will feature an exciting array of gardens, reflecting aspects of the visual and performing arts.

Garden areas will include *Main Street*, a place to promenade and perhaps catch a street theatre or musical performance. The *Impressionist Garden*, inspired by artists Claude Monet and Vincent van Gogh will be an intricate design of soft colours and

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Agents Comments

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will contrast with the striking and slightly 'offbeat' display of the *Surrealist Garden*. The *Art Nouveau Garden* is a tribute to the stylish design of that era, while the *Art of Pattern Garden*, inspired by Dutch artist MC Escher, highlights the simplicity of pattern. There will be a *Meadow Garden* and also a *Poet's Corner* — mass of daffodils inspired by the Wordsworth poem "Daffodils", a space where writers and poets can relate their art to an audience.

The increasingly popular *Australian Garden*, featuring Australian native species, will be located this year alongside the sparkling waters of Nerang Pool. Plant sales and horticultural demonstrations will take place in this area.

The design is the work of ACT Landscape, Public Works and Services, Department of Urban Services.

Events in the Canberra Region

Each year an abundance of events, exhibitions and open days in the Canberra region coincide with Floriade. This year arts organisations throughout the Canberra region will be encouraged to present activities to run in conjunction with this year's *Celebration of the Arts* theme.

Further information about events throughout Canberra during Floriade are available on the Floriade Hotline — 1800 020 141.

Dave's Roach Pfft!

Chadam Research of Florida USA has tried every cockroach/palmetto bug control product on the market, I think, and finds that they are quite effective in the short term, but soon lose potency, as roaches quickly develop immunities.

There is a class of roach baits that is based on a very old home remedy. Those remain effective.

I've used this since the 'sixties and HAVE no roach problems:

1 tablespoon boric acid powder
1 tablespoon sugar
1 tablespoon flour
the white of one egg

Mix the ingredients together thoroughly until you have a paste. Place the goo on a piece of aluminium foil and press it to about a quarter of an inch in thickness, and dry it in the oven at the lowest temperature setting or in the sun until it is hardened to a rubbery consistency.

Cut the patty into one half inch squares and toss them under benches and in areas where roaches congregate, but that do not get watered.

Repeat every six months.

The mix is not dangerously toxic to humans or most pets, but it is a good idea to keep it out of their reach.

I put a square in each closet and cabinet in the house. It is not toxic to humans in trace amounts.

The method is not immediate, but you will notice less and less roaches for about four weeks. By six weeks, there will be none — and repeating the process twice a year guarantees they will not return.

Certain ants are also eliminated by the process. It is non-toxic and non-polluting. It is clean and safe.

What more could one ask? — *C. D. Moulton*

New Orchid Society

The Bellinger Valley Orchid Society is a new Society. The inaugural meeting was held in February and the first meeting was held in March. So far we have fifty members. The membership includes growers of some considerable experience and others who have small collections and have never belonged to an Orchid Society before. We have a very large hall which is ideal to show off our beautiful orchids and at the



first meeting there were over 80 plants, with many varieties from miniature species flowers to spectacular Cattleyas and Odontoglossums. Ray Clement was our first guest speaker and he set the theme of the Society with an informal talk, that expressed the committees feelings that the members should learn about the cultivation and appreciation of orchids while at the same time enjoying themselves and making many friends.

The Committee have been very busy, organising the myriad of formalities that have to be attended to, as well as designing a beautiful badge, organising social gatherings and a Bus Trip.

The Society have decided to have an open show on 17th August, 1996. This will be a one day show, with plants being benched by 8 a.m. The show will be held at the Anglican Hall in Bellingen, where we have our general meetings.

Bellingen is a great place to visit, with beautiful scenery and a very nice climate. Bellingen is set in a green valley, with smaller villages and farms. A 30 minute drive from the town takes the traveller to the Dorrigo Mountains, home of the *Sarc. fitzgeraldii*. If visitors prefer the seaside the area has that too with unspoiled beaches and seaside towns.

The weekend of the show is also the Bellingen Jazz Festival and visitors come from far and wide to attend. Also that weekend the Bellingen Craft Markets are on. Visitors are well catered for in the area with Craft Centres and tourist attractions and Coffs Harbour, a main tourist and accommodation centre is only a half hour away on good roads.

Bellinger members look forward to meeting visitors from other clubs. Our meetings are the 3rd Monday of every month starting at 7.30 p.m.

For further details contact Mrs. K. Mitchell, Secretary, (066) 550034

Queen's Birthday Orchid Spectacular

A magnificent competitive display of orchids will be on show over the long weekend at Adelaide Orchids Nursery, Lot 16 Pine Road, Woodcroft in South Australia on 8th, 9th and 10th June from 10-4pm daily. Free admission, all undercover.

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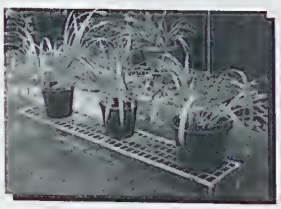
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AOR 049

Fifty-five Years Ago

Writing editorially Gilbert enumerated those factors with which the grower must be conversant so as to attain "the perfect cultivation of orchids". He suggests that each one could provide the theme for an article in the A.O.R. — a comment which is just as pertinent today. Here are his factors: flower structure; plant distribution; light; watering; humidity; ventilation; drainage; elevation and position of houses; potting; repotting; over-potting; potting materials; cultivation, pots or mounts; heating; insect pests; black rot and damping off; bud shedding; propagation, sexual or vegetative; overstocking; habitats. Recognise these factors? Heard it all before? So what's new epi-cat? Perhaps a good understanding of these factors would make us all champion growers. But all orchid plants are individuals, even those from the same flask, and growers are individuals too! We still wrestle with the problems inherent in Gilbert's list of 55 years ago and most of us have yet to master the perfect cultivation of orchids.

An article by W. Adamson of Brisbane, in which he discusses artificial cultivation in the glasshouse based on lessons of nature, is an example of the application of Gilbert's editorial. He reminds us that disease and vermin do not thrive on plants that are clean and in robust health, and these conditions are achieved by a correct balance of light, atmosphere, water and supply of nutriment.

Two anonymous pieces, "Meanderings of a Mug" and "The Light Side of Growing Orchids", take a humorous look at the trials and tribulations of the novice grower. We have all been through this stage and by reading of the misfortunes of others, we are able to laugh at our own. Who among us has not had the experience of dividing a plant, only to see one half thrive and the other die? Again, haven't we all taken the plant that won't grow and discarded it in the corner, only to find that six months later it is flourishing? These and similar happenings go toward making our hobby so demanding, challenging and satisfying.

The application of fertilisers to orchids is a subject that is guaranteed to start an argument in any orchid circle. I know some growers who refuse to use any but natural (organic) fertilisers, and some, just one or two, who refuse to use any fertiliser at all. This volume of the A.O.R. carried two contributions by expert growers on manuring of orchids.

Percy Gilbert describes the production of organic liquid manure by fermentation of animal manure in water. Stressing the importance of proper fermentation, he explains that the extract is "ripe" when it becomes clear after all turbidity has subsided. He cautions that the liquid should be used on the plant only during active root growth, and suggests that its use at other times can be harmful. He comments on inorganic or artificial manures, declaring that these are safe in very dilute solutions, but that strong solutions can be harmful to root growth.

R.E. Holttum writing of hybrid seedlings in the open at Singapore Botanic Gardens, reports that fortnightly application of a dilute solution of ammonium sulphate or a commercial product containing N, P and K, promotes healthy growth. He expresses his opinion "that judicious manuring is beneficial to plants which are in active growth", and emphasises the advantage of the clear inorganic solutions over the various extracts of organic material which tend to clog the compost.

Len Lawler
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PRODUCT REPORT

New Mini Hothouse Gives Gardeners a Professional Result

The dream of most gardeners is to successfully grow beautiful plants from their own seedlings and cuttings — no matter what the season and without the expense of building a greenhouse.

Energy efficiency company, Thermofilm Australia has launched a range of accessories that compliment its already popular Heat 'n' Grow heated propagation trays.

The new Heat 'n' Grow Lite Kit and Heat 'n' Grow Plant Dome create a mini hothouse, which, when used with the heated propagation trays, allow the home gardener to achieve results that professionals would be proud of.

The Heat 'n' Grow Plant Dome sits on the propagation tray to create a moist humid environment, operating just like a commercial greenhouse. The vacuum moulded cover has three air vent turntables to enable air to circulate freely or they can be closed to create a more humid environment, depending on the plants' requirements.

The Plant Dome has tall sides so that seedlings can be grown up to 16 centimetres before the need to transplant, allowing the plants to become better established and thereby reducing losses.

To complement the Plant Dome, Thermofilm has also released the Heat 'n' Grow Lite Kit. This light stand enables the gardener to control light levels so that plants can be grown indoors easily and economically.

The Lite Kit can utilise a variety of globes, such as the True Lite Plus. This is a 13 watt low energy compact fluorescent, which simulates the full spectrum of daylight and allows seedlings and cuttings to get exactly the light they would in the garden.

Ms Wendy Parkinson, Thermofilm's plant product specialist, said that in the past it has been difficult for the hobbyist or serious gardener to accurately recreate the temperature, humidity and the full balance of light spectrum so vital for a maximum quality yield.

"This Australian-made 'mini hothouse' offers a professional approach at a low cost," she added.

Heat 'n' Grow products are available at major nurseries, including Garden World/Gardensmart in Keysborough and hydroponics outlets.

For more information contact: Wendy Parkinson, Thermofilm Australia Pty Ltd, 27 Rosalie Street, Springvale, 3171. Tel: (03) 9562 3455. Fax: (03) 9548 3979.

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AOR 041

New Orchid Hybrids

SEPTEMBER/OCTOBER/NOVEMBER 1995 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
ADAGLOSSUM		
Wiley Kiley	*Ada keiliana* × *Odm. wyattianum*	A. Salzman
**AGANAX (Agx.)*		
Eva's Blue Amazon	*Agn. cyanea* × *Clx. jugosus*	Orquideas Eva (S. Nakashima)
ANGULOCASTE		
Island of June	*Angcst.* Glencoe × *Lyc.* Auburn	J. Shimazaki
Maureen	*Ang. uniflora* × *Lyc.* Jackpot	H. Oakeley
Nita	*Lyc. skinneri* × *Ang. virginalis*	G. Bergold
Thomas	*Angcst.* Tudor × *Lyc.* Balliae	H. Oakeley
Wyld Dragon	*Ang. clowesii* × *Lyc. locusta*	H. Oakeley (Wyld Court)
ASCOCENDA		
Fuchs Rainbow	*V.* Marlene Clark × *Ascda.* Yip Sum Wah	R. F. Orchids
Fuchs Sunspots	*Ascda.* Satta Beauty × *V.* Tubtimtepya	R. F. Orchids
Golden Motes	*V.* Paki × *Ascda.* Motes Goldenrod	Motes
Ming-Fei Mah	*Ascda.* Flambeau × *V. tessellata*	Y. Alsagoff
Motes Dapple Blossom	*V. tricolor* × *Ascda.* Motes Hot Petunia	Motes
Motes Ginger Hot	*V. lamellata* × *Ascda.* Motes Goldenrod	Motes
Motes Pizzazz	*Ascda.* Motes Hot Petunia × *V.* Motes Indigo	Motes
Motes Sand Storm	*Ascda.* Motes Goldenrod × *V.* Motes Butterscotch	Motes
Motes Sunlight	*Ascda.* Motes Goldenrod × *V. sanderiana*	Motes
Ruby Tuesday	*V. merrillii* × *Ascda.* Truman Motes	Motes
ASCONOPSIS		
Leo Yap	*Ascps.* Irene Dobkin × *Phal.* White Angel	T. Hill (R. Morita)
ASCOVANDORITIS		
Pulchrine Gold	*Dor. pulcherrima* × *Ascda.* Brighton Citrine	Brighton Nursery
BEALLARA		
Saint Lucie River	*Mtssa.* Zanzibar × *Oda.* Harrods Forever	Everglades
BRASSOCATTLEYA		
Donna Bells	*Bc.* Donna Kimura × *C.* Empress Bells	Minoru Ind. (Y. Ikumoto)
BRASSOLAELIA		
Aurora	*L. anceps* × *B. nodosa*	G. Silvera
BRASSOLAELIOCATTLEYA		
Atardecer de Otoño	*Lc.* Estrella de Otoño × *Blc.* Amanecer de Oro	R. Sobrino
Bouton Walk	*Blc.* Bouton D'Or × *C. walkeriana*	J. & C. Baughman (Gavin Yamada)
Camaroo	*Blc.* Granite Bay × *Blc.* Waikiki Sunset	R. Saunders
Charlotte Sandberg	*Blc.* Ronald Hausermann × *Blc.* Norman's Bay	J. Grezaffi
Cuomo-Joe	*Blc.* Vola Otto × *C.* Marie Fetzer	J. Grezaffi
Dinki-Di	*C.* J. A. Carbone × *Blc.* Sylvia Fry	Don Massey
Eric Paul	*Blc.* Ronald Hausermann × *Blc.* Lavender Star	Hausermann
Ernie's Love	*Blc.* Heart of Gold × *Lc.* Irene Finney	Hausermann
Forest Sprite	*Blc.* Golden Galleon × *Blc.* Woodland Hues	E. B. Horton
Glenlee Sunset	*Blc.* Makaha Gold × *Blc.* Ponkan's Southern Lady	R. Bills
Green King	*Blc.* Sugar Loaf Mountain × *Blc.* Maitland	Ching Her
Magic Mint	*Blc.* Lester McDonald × *Lc.* Eugene Casey	E. B. Horton
Malvarosa Purple Ward	*Blc.* Bobby Ward × *Blc.* Memoria Crispin Rosales	Malvarosa
Marcia Clark	*Blc.* Ruth Bates × *Lc.* Kathryn Leahey	J. Grezaffi
Memoria Mary Anderson	*Blc.* Oconee × *Blc.* Eve Marie Barnett	Lauralin
Motoko Ochiai	*C.* Fiddlesticks × *Blc.* Meditation	N. Taki
Napp's Blush	*Blc.* Ruben's Verde × *Lc.* Thaddeus Napp	E. B. Horton
Nevarez Gold	*Blc.* Lime Kiss × *Blc.* George King	Rod McLellan Co.
Nuage de Valec	*Blc.* Waikiki Gold × *Blc.* Nuance	Vach. & Lec.
Oasis de Valec	*Lc.* Yolo × *Blc.* Waikiki Gold	Vach. & Lec.
Rick Federighi	*Blc.* Jane Sherouse × *C.* Chocolate Drop	Hausermann
Sakurahime	*Blc.* Love Sound × *C.* Candy Tuft	Dogashima
Sully's Color	*Blc.* Garrett Sullivan × *C. bicolor*	E. B. Horton
Taree Gem	*Lc.* Drumbeat × *Blc.* Dundas	M. Zeller
Waikiki Purple	*Blc.* Waikiki Gold × *Lc.* Confusa	H. Rohrl (Harry Crosby)

NAME	PARENTAGE	REGISTERED BY
BUIARA		
Memoria Phila Williams	*Hknsa.* Alice Iwanaga × *Epi. tampense*	J. C. Williams
BURRAGEARA		
Nelly Isler	*Burr.* Stefan Isler × *Milt.* Kensington	J. Isler
CALANTHE		
Cosmo-Violet	Teruko Ito × *masuca*	Kokusai
CATASETUM		
João Stivalli	Mary Spencer × *pileatum*	J. Stivali
CATTLEYA		
Caudebec	Sophia Martin × Penny Kuroda	R. Cuddeback (O/U)
Notturno	*schilleriana* × *violacea*	H. Wallbrunn
Panache Amphora	*bicolor* × Chocolate Drop	J. Walters
Schillac	Cognac × *schilleriana*	Golden Gate
Walter Wolff	*maxima* × *violacea*	M. Wolff (O/U)
CHRISTIEARA		
Joe David	*Aër. houlletiana* × *Ascda.* Yip Sum Wah	P. P. David (Chao Praya Orch)
CIRRHOPETALUM		
Lion King	*medusae* † × *mastersianum* †	Suphachadiwong
Santa Claus	Elizabeth Ann × *fascinator*	Suphachadiwong
Thai Spider	*medusae* × *gracillimum* †	Suphachadiwong
CIRRHOPHYLLUM		
Freudian Slip	*Bulb. eublepharum* † × *Cirr. lepidum* †	J. Hermans
Pale Face	*Cirr.* Elizabeth Ann × *Bulb. macranthum*	Suphachadiwong
CYMBIDIUM		
Abacus	Sir Brent × Fitzgerald Glade	R. Tucker
Ashdown	Putana × Loch Lomond	McBean's
Balmer Down	Strathmore × Red Beauty	McBean's
Carnival	Mavourneen × Vangie	McBean's
Christmas Ember	Christmas Angel × Angelica's Lady	McBean's
Christmas Joy	Christmas Angel × Red Beauty	McBean's
Early Rosa	Earlyana × Rosanna	Takaki O.N.
Foxfire Candy	Trigo Royale × Lancashire Rose	Foxfire
Foxfire Gem	Valley Angel × Rose Armstrong	Foxfire
Foxfire Jade	Winter Wonder × Zumma Boyd	Foxfire
Gavin	Winter Wonder × Beaconfire	Ezi-Gro
Haruna	*goeringii* × Warona	Takaki O.N.
Hayley	Katie's Dream × Ruby Eyes	Ezi-Gro
Janet Carter	Sleeping Beauty × *insigne*	E. Stockstill (A. Easton)
Joy Raye	Showoff × Cherry Cola	Ezi-Gro (Geyserland)
Karen	Red Beauty × Coraki	Ezi-Gro (Geyserland)
Kiwi Boy	Fanfare × Yellow Prince	R. Tucker (O/U)
Kiwi Cutie	Robin × *devonianum*	R. Tucker
Kiwi Green	Showgirl × Fanfare	R. Tucker
Kiwi Melody	Celadon × Kiwi Boy	R. Tucker
Lady Dream	Lan Lan × Old Star	Takaki O.N.
Lady Heart	Hiroshima Lady × Sweetheart	Takaki O.N.
Lan Lan	Lancelot × Lalantes	Takaki O.N.
Linch Down	Nip × Red Beauty	McBean's
Loch Finlas	Howick × Goldrun	McBean's
Loch Grannoch	Caithness × Goldrun	McBean's
Lochinvar	Loch Lomond × Goldrun	McBean's
Loch Maberry	Western Hill × Goldrun	McBean's
Loch Spallander	Mavourneen × Goldrun	McBean's
Marshmallow	Winter Fair × Sweetheart	Takaki O.N.
Melissa Ann	Greenock × Lone Star	Ezi-Gro
Melody Heart	Music Box Dancer × Sleeping Giant	Kawano Mericlone
Memoria Mark Henbury	Wallara × Mighty Mouse	P. Jenzen (R. Kashima)
Mighty John	Mighty Mouse × Robin	Ezi-Gro
New Star	Tainui × Frosty Jack	Takaki O.N.
New Step	*goeringii* × Roseville	Takaki O.N.
Ocean Dome	Fortissimo × Half Moon	Kawano Mericlone
Old Star	Lagrange × Sandust	Takaki O.N. (O/U)
Oriental Candle	Haruna × *sinense*	Takaki O.N.
Oriental Noble	Oriental Mini × *sinense*	Takaki O.N.
Oriental Summer	*gyokuchin* × *eburneum*	Takaki O.N.

NAME	PARENTAGE	REGISTERED BY
CYMBIDIUM continued		
Paddy Mouse	Mighty Mouse × Cora Paddison	Ezi-Gro (Geyserland)
Peace Fire	Mimi × Realité	Takaki O.N.
Peace Memory	Lucky Kawano × Early Rosa	Takaki O.N.
Peace World	Hiroshima Lady × Old Star	Takaki O.N.
Romantic Flower	Lucky Flower × Valley Flower	Kawano Mericlone
Ruby Blush	Khairpour × Palace Court	Ezi-Gro
Sandust	Stardust × John Sander	Takaki O.N. (O/U)
Sapphire Coast	Borough Green × Sensation	B. Blackley
Sardinia Bay	Rozel Bay × Solana Beach	D. Volschenk
Saxon Down	Putana × Pixie	McBean's
Sleeping Dragon	Pendragon × Sleeping Beauty	M. Weston (Easy Orchids)
Stanher Down	Ashdown × Red Beauty	McBean's
Summer Holiday	Howard Cobb × Peter Pan	Shogo Sato
Sweet Ruby	Eikoh × Hiroshima Rora	Takaki O.N.
Tricia's Winter	Winter Fire × Tricia Allen	A. Proepster
Warren Michael	Alegria × Terama	Ezi-Gro
Water Comet	Walu × Peter Pan	Takaki O.N.
Western Tranquility	Claude Pepper × Winter Wonder	J. Bingham (Henley Brook)
Willunga Regal	Kiata × Ruby Eyes	Mills
Willunga Splash	Hove × Solana Beach	Mills
DEKENSARA		
Luisa	*Bc.* Binosa × *Schom.* Wellesley	W. Hunnewell
DENDROBIUM		
Bellinger Mist	Ellen × Delicate Ellen	N. Mitchell
Caraking	Carawah × *kingianum*	N. Mitchell (Michael Harrison)
Crooky	Lorikeet × *speciosum*	D. Cruickshanks (D. Butler)
Elishea Hidajat	Penang Candy × D'Bush Pansy	Y. Alsagoff
Enzed Magic	Jombock × Doug Burgess	D. Burgess
Freedom	King-Wong × Wonga	R. & D. Sheen
Friends of Charlotte	Little Bolonga × *phalaenopsis*	J. Grezaffi
Gillieston Reward	Peewee × Ku-Ring-Gai	W. Skillicorn
Gillieston Surf	Peewee × Hastings	W. Skillicorn
Gillieston Wow	Peewee × King-Wong	W. Skillicorn
Golden Mary	Wee Mary × *chrysotoxum*	Suphachadiwong
Haleahi	Waianae Valley × Norma Jackson	Hawaiian Fl. Nurs (D. Sugita)
Hocus-Pocus	Sri-Siam × *canaliculatum*	Suphachadiwong
Jane Wilson	American Beauty × Linda Ogrinc	R. F. Orchids
Joysum	Joy Wray × *ruppiosum*	N. Roper
Jungle Grapes	*cumulatum* † × *sanguinolentum*	Suphachadiwong
Kayla	Lynette Banks × Tweed	C. Brandon
Lady Fancy	Little Wilai × Thai Pearl	Suphachadiwong
Lemon Sweet	White Fairy × *cruentum*	Suphachadiwong
Lisa Turner	Zip × *speciosum*	J. Purvis
Little Lady	Thai Opal × Thai Angel	Suphachadiwong
Living Beauty	Formidible × Kinzweiler Pink	Suphachadiwong
Lollipop	Kinzweiler Pink × *bigibbum*	Suphachadiwong
Malvarosa Caesar	Caesar × Malvarosa Song	Malvarosa
Malvarosa Stripe	Jonnie Osterholt × Candy Stripe	Malvarosa
Maui Stripe	Kiilani Stripe × Doreen	Exotic Orchids (K. Kamiya)
Memoria Ricky Bruschi	Colonial Surprise × Nooro	I. Klein
Miss Thailand	Lollipop × Thai Ruby	Suphachadiwong
Monsoon Time	Merritt Island × Somsak	T. Vajrabhaya
National Trade Union	Chean Nyek Ngo × Joanna Mesina	Singapore Bot. Gdns.
Peter David	Amro × Hoon Cheong San	P. P. David (Koh Keng Hoe)
Pink Sunrise	Jungle Grapes × Kinzweiler Pink	Suphachadiwong
Puntsagiin Jasrai	Intuwong × D'Bush Pansy	Singapore Bot. Gdns.
Right on Cue	Ellen × Gracious Falcon	Don Massey
Rita Pink	Kinzweiler Pink × Ekapol	Suphachadiwong
Riversun	Red River × Sunglow	N. Roper
Robsan's Charmer	Liholiho × *carronii*	R. Perreira
Roslyn Harrison	Ellen × Dot Sheen	N. Mitchell
Something Cute	Delightful × *bifalce*	R. Perreira
Song of Joy	Formidible × Pinky Sem	Suphachadiwong
Starhai	Allstar × Tawhai	N. Mitchell
Thai Gold	Golden Mary × Ueang Phueng	Suphachadiwong
Than Shwe	Lady Hochoy × Theokul	Singapore Bot. Gdns.
Theokul	Theodore Takiguchi × Pikul	Singapore Bot. Gdns.
Tolga	Brolga × Pinterry	N. Roper
Venus Blaze	Anching Lubag × Retrorocket	Hawaiian Fl. Nurs.
Victoria Dorothy deBruyne	Nellie Corbett × Tirta Maya	V. C. de Bruyne (R. Corbett)
Wodonga	Yondi × Wonga	R. & D. Sheen
Wonga's Dream	Dream Girl × Wonga	R. & D. Sheen

NAME	PARENTAGE	REGISTERED BY
DIACATTLEYA		
Ptolemy	*C.* Baby Kay × *Diacm. bicornutum*	Harold Johnson
DORITAENOPSIS		
Abed-nego	*Dtps.* Inferno × *Phal.* Malibu Imp	H. P. Norton
Anika Röllke	*Dtps.* Asahi × *Phal.* Carmela's Pixie	Röllke Orchzt.
Beryl Debs	*Dtps.* Red Maid × *Phal.* Hausermann's Passion	Hausermann
Brother Isabel	*Dtps.* Okay Seven × *Phal.* Carmela's Spots	Brother
Brother Julius	*Dtps.* Okay Seven × *Phal.* Carmela's Pixie	Brother
Brother Pico Rose	*Dtps.* King Shiang's Rose × *Phal. equestris*	Brother
Brother Violet Princess	*Dtps.* Tonjy Yuby × *Dtps.* King Shiang's Rose	Brother
Carrie Davis	*Dtps.* Orglade's Tartan × *Phal.* Ida Fukumura	Orchid Plantation
Charline Nakamura	*Phal.* Orglade's Lemon Dew × *Dtps.* Soroa Golden Sun	Soroa
Chew Tiek San	*Dtps.* Purple Gem × *Dor. pulcherrima*	R. Karean (Chew Tiek San)
Cosmo-Ruby	*Dtps.* Pink Bells × *Dor. pulcherrima*	Kokusai
Crystal Blush	*Dtps.* Crystal Palace × *Dtps.* Blushing Bridesmaid	Orchids Ltd [MN]
Dizzy Spell	*Phal.* Spotshine × *Dtps.* Bedazzled	Orchid Zone (H. Hager)
Elaine Parke	*Dtps.* Pretty Nice × *Phal.* Tungku Afzan	Hausermann
Emilee Anne	*Phal.* Hausermann's Gene × *Dtps.* Unique Opening	Hausermann
Fuchsia Doll	*Phal.* Celebrate × *Dor. pulcherrima*	Orchid Zone (H. Hager)
Gold Strike	*Phal.* Goldberry × *Dtps.* Garry Solmonson	Orchid Zone (H. Hager)
Grant Threlfall	*Phal.* Perfect Harmony × *Dtps.* Mount Beauty	Hausermann
Happy Tart	*Dtps.* Happy Valentine × *Dtps.* Orglade's Tartan	Orchid Plantation
Inverness Lass	*Phal.* Classy Lassie × *Dtps.* Inverness Firebrand	Hausermann
Izumi Love	*Phal.* Liu Tuen-Shen × *Dtps.* Happy Valentine	Fujii Orchids
James Oliver	*Phal.* Hausermann's Sizzler × *Dtps.* Hausermann's Classic	Hausermann
Jason's Happiness	*Dtps.* Jason's Moon × *Phal.* Zuma Happiness	Sky Island
Jason's Moon	*Phal.* Spotted Moon × *Dtps.* Jason Beard	Sky Island (O/U)
Kim Federighi	*Dtps.* Tequila Sunrise × *Phal.* Earth Angel	Hausermann
Lightning	*Phal.* Coquinette × *Dtps.* Hausermann's Classic	Hausermann
L'interdit	*Phal.* Line Renaud × *Dtps.* Day and Night	Marcel Lecoufle
Lucille's Treasure	*Dtps.* Lucille Compton × *Dtps.* Lavender Lace	Hausermann
Memoria Sean Grady	*Dtps.* Orglade's Puff × *Phal.* Smile Maker	Hausermann
Memory Eric Shandel	*Dtps.* Alice Loeb × *Phal.* New Glad	Mrs C. Coll
Meshach	*Dtps.* Jim × *Dtps.* Shadrach	H. P. Norton
Michael Morse	*Dtps.* Escapade × *Phal.* Douglas Weber	Hausermann
Mishima Exotic	*Dtps.* City Girl × *Phal.* Malibu Exotic	Hanajima's
Mishima Lovely	*Dtps.* Odoriko × *Phal.* Romance	Hanajima's
Mishima Snow	*Phal.* Yukimai × *Dtps.* Double Trouble	Hanajima's
Mishima Spirit	*Dtps.* Mishima Promise × *Dtps.* Orglade's Puff	Hanajima's
Miva Nice	*Phal.* Ronde × *Dtps.* Mivarro	Michel Vacherot
Miva Silhouette	*Phal.* Mivac Caresse × *Dtps.* Martissimo	Michel Vacherot
Oh Dear	*Phal.* Jim Krull × *Dtps.* Cape Town	Sky Island
Pico Lady Ruby	*Dor. pulcherrima* × *Phal.* Kuntrarti Rarashati	Brother
Plantation Beauty	*Dtps.* Orglade's Tartan × *Phal.* Gallant Beau	Orchid Plantation
Plantation Lass	*Dtps.* Happy Valentine × *Phal.* Blushing Lass	Orchid Plantation
Plantation Silk Mist	*Dtps.* Canyon Mist × *Phal.* Silk Promise	Orchid Plantation
Plantation Tartan	*Phal.* Abendrot × *Dtps.* Orglade's Tartan	Orchid Plantation
Plum Rose	*Phal.* Abendrot × *Dtps.* King Shiang's Rose	Orchid Zone (Dou Fang)
Radiant Red Lip	*Dtps.* Mount Beauty × *Dtps.* Raving Beauty	Hausermann
Rick Federighi	*Phal.* Hamptons Pride × *Dtps.* Verdant Valley	Hausermann
Royal Classic	*Dtps.* Royal Welcome × *Dtps.* Hausermann's Classic	J. Stubbings (Hausermann)
Royal Glow	*Phal.* Special Glow × *Dtps.* Royal Welcome	Hausermann
Secret Opening	*Phal.* Hausermann's Secret × *Dtps.* Unique Opening	Hausermann
Shadrach	*Dtps.* Inferno × *Phal. venosa*	H. P. Norton
Silver Morn	*Phal.* Champion's Pride × *Dtps.* Wintry Morn	Hausermann
Stardust Rose	*Phal.* Western Rain × *Dtps.* Luminescent	Orchid Zone (H. Hager)
White Puffy Clouds	*Dtps.* Zuma White Puff × *Phal.* Hawaiian Clouds	Sky Island
William Bott	*Phal.* Wyche's Red Lip × *Dtps.* Pepperneys Choice	Worldwide (L. Poole)
Windsong's Genesis	*Dtps.* Ramsden × *Phal.* Ruth Harpstead	Windsong
DRACULA		
Don Quixote	*gigas* × *wallisii* †	Hillsview
**ELECALTHUSA (Ecth.)*		
Diana Yannetti	*Clts.* Poet's Song × *Elo. japonica*	R. Yannetti
**EUCLADES (Eucl.)*		
Saint Léger	‡ *Oecl. cordylinophylla* † × *Eupha. guineensis*	Marcel Lecoufle
GALEANDRA		
William Chanson	*leptoceras* † × *lacustris* †	J. Stubbings
GONGORA		
Bouffon	*truncata* † × *quinquenervis*	Marcel Lecoufle

NAME	PARENTAGE	REGISTERED BY
HASEGAWAARA		
Atomic Atoll	*Hknsa.* Alice Iwanaga × *Blc.* Yellow Imp	D. Neuendorff
KIRCHARA		
Purple Mae	*Epc.* Purple Glory × *Slc.* Mae Hawkins	H. Rohrl (Harry Crosby)
LAELIA		
Belle de Nuit	*L. bahiensis* † × *L. tenebrosa*	Marcel Lecoufle
LAELIOCATTLEYA		
Aqua Planet	*Lc.* Tokyo Magic × *C.* Stardust Memory	Dogashima
Charles Macaulay	*Lc.* Edgard Van Belle × *Lc.* Adi Lady Lala	Sea God Nurs.
Cramerle	*C.* Luteous Forb × *L. briegeri*	Röllke Orchzt.
Dago Red	*C. violacea* × *L. milleri*	Tropic 1
Estrella de Otoño	*C. velutina* × *Lc.* Take Five	R. Sobrino (Rod McLellan Co)
Kimberly Federighi	*L. purpurata* × *Lc.* Dorothy Warne	Hausermann
Memoria Kyoto	*Lc.* Stephen Oliver Fouraker × *L. pumila*	Y. Ohtani
Naomi's Tender Heart	*C.* White Bridal × *L. briegeri*	N. Taki
Portuguese Gold	*Lc.* Copperglen × *Lc.* Edgard Van Belle	Sea God Nurs.
Purple Eyes	*L. pumila* × *C.* Pixie Elegance	Takaki O.N.
Sea God Satsuma	*Lc.* Pirate King × *Lc.* Edgard Van Belle	Sea God Nurs.
Stone Beat	*L. jongheana* × *Lc.* Drumbeat	T. Ishii
Summer Christmas	*Lc.* Tokyo Magic × *C.* Angelwalker	Dogashima
Trudy Marsh	*L. sincorana* × *C. violacea*	J. Rehfild (R. F. Marsh)
Won Hui	*C. loddigesii* × *L. fidelensis*	K. Siegler (O/U)
LEPANTHOPSIS		
Debora	*floripecten* × *astrophora* †	M. Behar
LYCASTE		
Anthony	Auburn × Loftus	H. Oakeley
Auriol	*dowiana* × *macrophylla*	H. Oakeley
Bawley Point	Jonapp × Macama	E. Beehag
Doug Kennedy	*ciliata* × *skinneri*	A. Salzman
Fire Bird	Island of Vulcorn × Macama	Takaki O.N.
George	*trifoliata* † × Momoyama	H. Oakeley
Hamana Peak	Hamana Jason × Highland Peak	Takaki O.N. (Saeki Nurs.)
Jack	*candida* × *bradeorum* †	H. Oakeley (O/U)
John	Auburn × *deppei*	H. Oakeley (O/U)
Matthew	Vulcan × *skinneri*	H. Oakeley
Peace Lady	Hamana Peak × *skinneri*	Takaki O.N.
Peace Rosa	Hamana Peak × Macama	Takaki O.N.
Rosamond	*dowiana* × *skinneri*	H. Oakeley
Silk Lemon	Aquila × Hamana Peak	Takaki O.N.
Wine Fair	Macama × Hamana Wine	Takaki O.N.
Wyld Dream	Lucianii × Wyld Unicorn	H. Oakeley (Wyld Court)
Wyld Romance	Aphrodite × Wyldfire	H. Oakeley (Wyld Court)
MACLELLANARA		
Colin Ryono	*Odcdm.* Tiger Butter × *Brs. gireoudiana*	R. Stone
Leopard	*Mclna.* Pagan Lovesong × *Odm. bictoniense*	Golden Gate
MASDEVALLIA		
Auburn Hero	*veitchiana* × *hercules* †	J & L
Black Widow	*ayabacana* × *cucullata*	J & L
Cotillion	*hymenantha* † × *coccinea*	J & L
Dragon Fire	*panguiensis* × *veitchiana*	J & L
Golden Girl	Copper Angel × *uniflora*	Baker & Chantry
Mabel	*amabilis* × *attenuata*	A. Barty
Pinwheel	*yungasensis* × *caudata*	J & L
Shinichi Komoda	Copper Angel × *tonduzii*	I. Komoda
MILTONIA		
Beaumont	Jersey × Goodnews Bay	E. Young O.F.
Edgwood	Alderwood × Edwidge Sabourin	Hillsview
Faldouet	Memoria Ida Seigel × Gattonensis	E. Young O.F.
Le Nez Point	Goodhope Bay × Memoria Ida Seigel	E. Young O.F.
Les Platons	Hamburg × Akagi	E. Young O.F.
Mont Mado	Jersey × Bel Royal	E. Young O.F.
Plemont Point	Goodnews Bay × Bleuana	E. Young O.F.
Rocco Tower	Jules Hye de Crom × Hamburg	E. Young O.F.
Saint Mary	Alexandre Dumas × Gattonensis	E. Young O.F.
Verclut Point	Alexandre Dumas × Blackberry Cream	E. Young O.F.

NAME	PARENTAGE	REGISTERED BY
MILTONIDIUM		
Cojones	*Milt.* Minas Gerais × *Onc.* Elegance	H. Rhorl
ODONTIODA		
Beauchamp	*Oda.* L'Etacq × *Oda.* Grosnez Castle	E. Young O.F.
Falls Creek	*Oda.* National Trust × *Oda.* Annette	E. Beehag (G. McCraith)
Patricia Hill	*Oda.* Ebury Court × *Oda.* Joe's Drum	T. Brydon
Rouge Bouillon	*Oda.* L'Etacq × *Oda.* Belcroute	E. Young O.F.
Samantha Gettel	*Oda.* Florence Stirling × *Oda.* Alstir	Sunset
Tesson Mill	*Odm.* Coupe Point × *Oda.* L'Etacq	E. Young O.F.
ODONTOGLOSSUM		
Fliquet Bay	*cirrhosum* × Mont Fallu	E. Young O.F.
Mont Neron	Tordonia × Mont Fallu	E. Young O.F.
ONCIDIUM		
Bloodcrest	Maddie Gulbrandson × Killer Bees	Golden Gate
Brown Eyes	Kuron × Sundance	D. Neuendorff (O/U)
Fresh Face	Carotene × Stunner	W. Savage (Richella)
Golden Handshake	Memoria Harold Starkey × Memoria Audrey O'Hara	D. Neuendorff
Lucinda	Sunny Queensland × Willow Gold	D. Neuendorff (W. & J. Cannons)
Memoria Audrey O'Hara	Brown Eyes × Lucinda	D. Neuendorff (R. O'Hara)
Misaki Highlight	Taka × *marshallianum*	N. Taki (Yoshitaka Yamamoto)
Misaki Yellow	Sweet Sugar × Mangetsu	N. Taki (Yoshitaka Yamamoto)
San Diego Fireball	Olga Wright × Passionata Red	G. Luetticke (O/U)
Sundrum Kuppan	Rosalina Samsudin × *flexuosum*	Y. Alsagoff
Sunny Queensland	*varicosum* × Lava Flow	D. Neuendorff (I. A. Butler)
OTAARA		
Shaman	*Blc.* Garrett Sullivan × *Ctna.* Keith Roth	E. B. Horton
PAPHIOPEDILUM		
Arabian Night	Voodoo Magic × Petula	N. Mochizuki
Arabian Rainbow	Ernest Read × Lemförde Surprise	S. Aoyagi
Ascot Gavot	Hortense × *venustum*	A. Mochizuki
Betty Glenn	Utgard × *liemianum*	A. Mochizuki
Buena Vista	Imelda Bobadilla × Palos Verdes	Orchid Zone (T. Root)
Caramel de Valec	Batelier × Mitylene	Vach. & Lec.
Centerstage	Centerpiece × Psyche	Orchid Zone (T. Root)
City Connection	William Mathews × Virginia Moffett	A. Mochizuki
Cocoa Cherry	Gloriosum × Nettie McNay	Orchid Zone (M. Pendleton)
Dark Magic	Faire-Maud × Joanne's Wine	Orchid Magic (Hanes Orch.)
Dragon Mint	Maudiae × Auroreum	A. Mochizuki
Drayton Fire	Shady Lady × Colorbox	Florafest
Drayton Peppers	Achentaler Schwarz × *sukhakulii*	Florafest
Flashfire	Betelgeuse × Flasher	Orchid Zone (T. Root)
Gene Hausermann	Adam Hausermann × Vintner's Treasure	Hausermann
Gerd Potent	*fairrieanum* × Tarentaal	Cramer
Golden Queen	Snowman × Gege Hughes	Orchid Zone (T. Root)
Gondole de Valec	Gowerianum × Mitylene	Vach. & Lec.
Greenfrost	Memoria Toshio Miyata × Fidelity	Orchid Zone (T. Root)
Hikarimai	Kay Penny × Dusty Miller	M. Yamazaki
Ivory Elf	Imelda Bobadilla × Virgo	Orchid Zone (T. Root)
Jimmy Ohnishi	Maudiae × Iantha Stage	S. Ohnishi
Karen Van Meter	*virens* × *violascens*	S. R. Weltz
Khosey	*gratrixianum* × *sukhakulii*	K. Ueda
Khosey's Arrow	Amanda's Arrow × Paeony	K. Ueda
Khosey's Hellion	Hellas × Amanda's Arrow	K. Ueda
Khosey's Isle	Hellas × Somers Isles	K. Ueda
Khosey's Lock	Lockinge × Amanda's Arrow	K. Ueda
Khosey's Wall	London Wall × Amanda's Arrow	K. Ueda
Khosey's Wind	Zycleon × *bellatulum*	K. Ueda
Lily Sands	Love Song × Makuli	A. Mochizuki
Lippefels	Deadwood Trail × Edelstein	F. Hark
Lippefreude	Lippewunder × Maike	F. Hark
Lippegirl	Anja × Maike	F. Hark
Lippehill	Feuerwerk × Keyeshill	F. Hark
Lippetraum	Lippewunder × Memoria Arthur Falk	F. Hark
Lippetriumph	Lippewunder × Anja	F. Hark
Marina Del Rey	Salvadore Dali × *delenatii*	A. Mochizuki
Marry Japan	Hellas × Dusty Miller	M. Yamazaki
Memoria Belva Jernigan	Chiara × Makuli	F. Jernigan
Memoria Ben Wrighton	Maudiae × Black Prince	F. Jernigan

NAME	PARENTAGE	REGISTERED BY
PAPHIOPEDILUM continued		
Memoria Charles Oppenheim	*malipoense* × Skip Bartlett	S. R. Weltz
Michiru Sasano	Hamana Valman × Paeony	N. Taki
Mina de Valec	Almalune × Mitylene	Vach. & Lec.
Mitsy de Valec	Maudiae × Mitylene	Vach. & Lec.
Miyabi Genji	Musketier × Winston Churchill	N. Izumi (M. Tibbs)
Miyabi Yuugiri	Sparsholt × Fred Cosanka	N. Izumi (M. Tibbs)
Monteen Booth	Mount Toro × Honey	F. Booth
Nikko Summer	Ernest Read × *lawrenceanum*	S. Aoyagi
Pacific Moore	Pacific Beauty × Farnmoore	Suwada Orch.
Pacific Sundance	Hellas × Pacific Foam	Orchid Zone (T. Root)
Phillip Alexander	*superbiens* × *violascens*	S. R. Weltz
Pulsar	Red Sky × Voodoo Magic	Orchid Zone (T. Root)
Redflight	Red Maude × Memoria Robert Ward	Orchid Zone (T. Root)
Remembrance	Meditation × *charlesworthii*	Orchid Zone (T. Root)
Satchel Paige	*wardii* × Vintner's Treasure	N. Mochizuki
Star Knock	Docteur Knock × *wardii*	N. Mochizuki
Stone Almost	Alma Gavaert × *hookerae*	T. Ishii
Stone Candy	*primulinum* × Cameron Creek	T. Ishii
Stones Isles	Maudiae × Somers Isles	T. Ishii
Stone Rainbow	Alma Gavaert × *urbanianum*	T. Ishii
Stone Red Dragonfly	Alma Gavaert × *appletonianum*	T. Ishii
Sugar Doll	Maudiae × Psyche	S. Ohnishi
Swing Tower	World Exploit × Winston Churchill	M. Yamazaki
Tear Drop	Sweet Lemon × *primulinum*	S. Aoyagi
Vert de Valec	Maudiae × Reflet Vert	Vach. & Lec.
Vicard Point	*rothschildianum* × Sussex Vintage	E. Young O.F.
Walter Knott	William Mathews × *appletonianum*	A. Mochizuki
Wilma Hughes	Rolfei × Bella Lucia	Orchid Zone (J. F. Hughes)
Winter Ermine	Skip Bartlett × Virgo	Orchid Zone (T. Root)
Wintermoon	Greyi × *emersonii*	Orchid Zone (T. Root)
Wössner Super Swithin	Greyi × Saint Swithin	F. Glanz
PARACHILUS		
Issy's Rainbow	*Prcls.* Selwyn × *Sarco. fitzgeraldii*	Florafest (I. Klein)
Wollumbin Sunrise	*Sarco.* Pinky × *Psarco. hirticalcar*	Simpson Orchids
PHALAENOPSIS		
Adam's Glow	Hausermann's Adam × Prairie Du Chien	Hausermann
Alice's Windsong	Lottie Halverson × Alice Sharpe	Windsong
Allegheny Dream	Allegheny Moon × Gentle Dream	Hausermann
Amber Smile	Antarctic Sunrise × Balence	John Hutchinson
Ambo Imp	Malibu Imp × *amboinensis*	Sky Island (O/U)
American Angel	Earth Angel × All American	Hausermann
Andy's Dazzler	Andy John × Razzle Dazzle	Hausermann
Arctic Maiden	Ice Breaker × Virgin Snow	Hausermann
Arctic Pride	Ice Breaker × Hamptons Pride	Hausermann
Aurore de Valec	Aurore Boreale × Bamboo Baby	Vach. & Lec.
Balchuck	Balcones × Chuck Hagan	John Hutchinson (O/U)
Balence	Vence × Balchuck	John Hutchinson (L. Poole)
Barbizon Village	Arpege × Claude Monet	Marcel Lecoufle
Blushing Lass	Dainty Lass × Lillian Eileen Pitta	Orchid Plantation (Krull-Smith)
Bon's Touch	Golden Buddha × Snow Leopard	Blossoming O.N.
Boréal	Tarragone × Jumbo	Marcel Lecoufle
Brother Accord	Taipei Gold × Ambonosa	Brother
Brother Apollo	Ho's Vivid Freckles × Brother Mirage	Brother
Brother Crystal	Misty Green × *amabilis*	Brother
Brother Eagle	Ida Fukumura × Ever-spring Rose	Brother
Brother Elizabeth	Brother Cucumber × *amboinensis*	Brother
Brother Evergreen	Bamboo Baby × Gelblieber	Brother
Brother Fireball	Chiayi Spot × Princess Kaiulani	Brother
Brother Golddollar	Taipei Gold × Su-An Cricket	Brother
Brother Kaiser	Golden Peoker × Fortune Buddha	Brother
Brother Lancer	Brother Buddha × Plantation Polkadot	Brother
Brother Moonlight	Little Mary × Taipei Gold	Brother
Brother Pico Mary	Super Stupid × *equestris*	Brother
Brother Romance	Be Glad × Maki Watanabe	Brother
Brother Sophia	Super Stupid × Brother Mirage	Brother
Brother Suree	Brother Buddha × Carmela's Pixie	Brother
Brother Torro	Peach Boy × Ambonosa	Brother
Brother Violet	Brother Yew × Jutta Brüngor	Brother
Buddha's Leopard	Buddha's Gift × Ho's Fancy Leopard	Sky Island
Buddha Tradition	Buddha's Gift × Auspice Center	Sky Island

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Candy Carnival	Carnival × Earth Angel	Hausermann
Candy Twist	Hausermann's Candy × Head Turner	Hausermann
Celebrity Princess	Princess Kaiulani × *celebensis*	Sky Island
Chantal Careau	French Delight × Liseron	G & B Orchid Lab.
Ching Her Princess	Spotted Moon × Paifang's Auckland	Ching Her
Dancing Fairie	Dancing Windsong × Windsong's Fairie	Windsong
Debra McDermott	Cassandra × Velvet Kiss	Hausermann
Delicate Temptations	Pink Delicat × Hausermann's Tempter	Hausermann
Dinah's Urchin	Zuma Urchin × Medinah	Sky Island
Doris Tan-Mann	Opaline × Artois	F. Tan
Double Angels	Angel Dancer × Earth Angel	J. Stubbings (Hausermann)
Double Exposure	Hilo Lip × Lightfoot Rose	Orchid Zone (H. Hager)
Douceur de Valec	Rouge-Gorge × Douce Amie	Vach. & Lec.
Dutch Maiden	Dutch Treat × Champion's Pride	Hausermann
Empreinte	Zauberrjoy × Ile Réunion	Marcel Lecoufle
Estampe de Valec	Spitzberg × Danse	Vach. & Lec.
Exotic Dream	Hausermann's Freckles × Seminole	Hausermann
Farouche	Joyau × Flamboyant	Marcel Lecoufle
Flammerole	Flamboyant × Barcarolle	Marcel Lecoufle
Fontanalbe	Geneviève de Préville × Spitzberg	Marcel Lecoufle
Friandise de Valec	*amboinensis* × Feria	Vach. & Lec.
Frivole de Valec	*amboinensis* × Fifi	Vach. & Lec.
George Leather	George Vasquez × Leather	Orchid Hatchery (O/U)
Gold Amaglad	Taipei Gold × Ho's Amaglad	Brother
Golden Happiness	Golden Heiko × Zuma Happiness	Sky Island
Golden Sun	Salu Spot × Sentra	Ching Her
Grape Pixie	Brother Grape × Carmela's Pixie	Brother
Green Idol	Mambo × *violacea*	C. Pool (O/U)
Green Sentra	Sentra × Salu's Golden Star	Ching Her
Hamptons Smile	Hamptons Pride × Smile Maker	Hausermann
Harriette Lineberger	Deventeriana × Preamble	UNC Charlotte (Owens Orch.)
Hausermann's Hot Spot	Mauston × Andrew Hausermann	Orchid Plantation (Hausermann)
Hawaiian Windsong	Hawaiian Passport × Royal Kathleen	Windsong
Heaven's Breeze	Cool Whip × Heaven's Pride	Hausermann
Heng Gek Hoon	Clementi Pink × Career Girl	David Lim
Hsueh-Gu Young	Orchid World × Kankou Beauty	Jar-How Lee
Irene Teo	Midori Matsumoto × Penang	David Lim
Jazz de Valec	Raptigny × *celebensis*	Vach. & Lec.
Jessie de Valec	Danse × Jessica	Vach. & Lec.
Kaala's Pride	Mount Kaala × Heaven's Pride	Hausermann
Lady Kaala	Lucky Lady × Mount Kaala	Worldwide (O/U)
Larry Shoemaker	Mariposa's Gold Princess × Golden Buddha	H. P. Norton
Lavender Joy	Joyau × Hakalau Ruler	Sky Island
Lavender Striped Beauty	Lavender Ribbon × Magical Beauty	J. Stubbings (Hausermann)
Line Dancer	Welcome Line × Angel Dancer	J. Stubbings (Hausermann)
Little Kevin	Little Debbi × Matou Hager	Orchid Plantation
Lorry Baker	Wappaoola × Luedde-violacea	H. P. Norton
Malibu Nobility	Zuma Red Eye × Sheila Greene	Zuma Canyon
Maria Isabella Vite	Kenneth Rudolph × Hausermann's Galaxy	Hausermann
Marionette	Marie-Françoise Morard × Ile Réunion	Marcel Lecoufle
Marisela Arias	Prairie Dancer × Pinlong Cardinal	Hausermann
Mary Pixie	Little Mary × Carmela's Pixie	Brother
Memoria Monica Marsh	Fifi × Clown Festival	C. Harrison
Mishima Fall	Crystal Ship × Helengene	Hanajima's
Mishima Frost	Wataboushi × Helengene	Hanajima's
Mishima Giant	Morning Cup × Hakalau White	Hanajima's
Mishima Honey	Mishima Charm × Joseph Hampton	Hanajima's
Mishima Moon	Mishima Charm × Hakalau Queen	Hanajima's
Misty Davis	Pink Eagle × Jewell Jamison	Orchid Plantation
Miva Cannelle	Miva Barbara × Miva Pieta	Michel Vacherot
Miva Gala	Fifi × Miva Panda	Michel Vacherot
Miva Mic	Mivalise × Miva Rafissimo	Michel Vacherot
Miva Pink	Mivarosa × Chamonix	Michel Vacherot
Morning Delight	Bright Morning × *equestris*	Sky Island
Nancy's Happiness	Nancy Gordon × Zuma Happiness	Sky Island
Neon Confetti	Welcome Line × Günther Dankmeyer	Hausermann
Oregon Clouds	Colette Lee Carpenter × Hawaiian Clouds	Sky Island
Oregon Gem	Carmela's Gem × El Molino	Sky Island
Oregon Ruler	Leopard Lip × Hakalau Ruler	Sky Island
Oregon Snow	White Lei × Colette Lee Carpenter	Sky Island
Oregon Sparkle	Small Wish × Hawaiian Sparkle	Sky Island
Oregon Spots	French Delight × Ho's Fancy Leopard	Sky Island

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Oregon Stripes	Crystal Harmony × Zuma Sonnet	Sky Island
Pacific Frost	Snowborn × Lillian Eileen Pitta	Orchid Zone (H. Hager)
Pacific Stars	Ann Krull × Petite Spot	Orchid Zone (H. Hager)
Pele's Touch	Stepping Stone × Deventeriana	Sky Island
Pink Souffle	Spring Silk × Pink Eagle	Orchid Plantation
Pixie Buddha	Golden Buddha × Carmela's Pixie	Brother
Plantation Challenge	Pink Challenge × Lippegruss	Orchid Plantation
Plantation Danse	Danse × Orglade's Checkmate	Orchid Plantation
Plantation Garnet	Paifang's Queen × Zuma Garnet	Orchid Plantation
Plantation Heartbeat	Pink Challenge × Rose Heart	Orchid Plantation
Plantation Hot Lips	Orglade's Hot Spot × Line Renaud	Orchid Plantation
Plantation Hot Shot	Fifi × Hausermann's Hot Spot	Orchid Plantation
Plantation Lippebeauty	Lippegruss × Coastal Beauty	Orchid Plantation
Plantation Promise	Silk Promise × Jewell Jamison	Orchid Plantation
Plantation Queen	Paifang's Queen × Rousserole	Orchid Plantation
Plantation Rascal	Gladrose × Coquinette	Orchid Plantation
Plantation Salsa	Brazilian Eyes × Bretagne	Orchid Plantation
Plantation Sprite	Gladrose × Ephelide	Orchid Plantation
Plantation Tango	Michael Davis × Crucigrama	Orchid Plantation
Plantation Temptation	Rose Heart × Ida Fukumura	Orchid Plantation
Plantation Tiger	Pink Zebra × Coastal Beauty	Orchid Plantation
Plantation Wedding	Chamonix × Hakalau Queen	Orchid Plantation
Plum Serenade	Plantation Plum × Plantation Serenade	Orchid Plantation
Pont Aven	Muse × Charleston	Marcel Lecoufle
Quiet Time	Fun Time × Orglade's White Rock	Hanajima's
Radiant Gem	Radiantly Yours × Hausermann's Superior	Hausermann
Raspberry Speckles	Cataracte × Abendrot	Orchid Plantation
Rose Tris	Rose Garden × *equestris*	Brother
Ruby Angel	Be Tris × Brazilian Legend	Orchid Zone (M. Pendleton)
Saint Bruno	Paul Bert × Claude Monet	Marcel Lecoufle
Saint Valentin	Line Renaud × Odeon	Marcel Lecoufle
Salu Beauty	Golden Amboin × Sentra	Ching Her
Salu Leopard	Salu Spot × Salu's Golden Star	Ching Her
Salu Princess	Salu Spot × Chiayi Spot	Ching Her
Salu Queen	Darling Taiwan × Paifang's Auckland	Ching Her
Sanguine	Joyau × Coquinette	Marcel Lecoufle
Satin Doll	Silk Promise × Blushing Lass	Orchid Plantation
Shades of Passion	Evening Shade × Hausermann's Passion	Hausermann
Shelley Siu	Spitzberg × James Leung	David Lim
Silver Angel	Champion's Pride × Heaven's Pride	Hausermann
Smiling Dutchman	Dutch Treat × Smile Maker	Hausermann
Snowmaker	Smile Maker × Antarctic	Hausermann
Snow Veil	Crystal Veil × Crystal Snow	Hanajima's
Soroa Double Dora	Double Delight × Mount Dora	Soroa
Soroa Eclipse	Wishing Well × Fifi	Soroa
Soroa Meditation	Abendrot × Carmela's Spots	Soroa
Soroa's Speckled Moon	Golden Buddha × Carnival Moon	Soroa
Sparkling Treasure	Hausermann's Treasure × Sparkling Sunset	Hausermann
Stanwell Douglas	Delicate Lady × Stanwell Annie	J. Latten
Stanwell Fiona	Tiger Butter × Shimmering Swan	J. Latten (O/U)
Stanwell John	Cadirena × Stanwell Annie	J. Latten
Stanwell Joseph	Musashino × Shiranami	J. Latten (O/U)
Star Wonder	Hausermann's Elite × Hausermann's Secret	Hausermann
Struber Gig	*lindenii* × Frisson	Röllke Orchzt.
Sulaceoimp	Sulaceous × Malibu Imp	John Hutchinson (O/U)
Sumatranosp	*speciosa* × *sumatrana*	M. Kobayashi
Summer Garnet	Summer Morn × Zuma Garnet	Orchid Plantation
Sunrise Delight	Rose Tris × Brother Buddha	Brother
Sweet Liberty	Micha's Child × Mivac Sweetissimo	H. P. Norton
Torie Rose	Hausermann's Adam × Hausermann's Passion	Hausermann
Tresor de Valec	*equestris* × Cataracte	Vach. & Lec.
Tudor Freckles	Hawaiian Freckles × Elizabeth Tudor	Sky Island
Tudor Leopard	Elizabeth Tudor × Leopard Lip	Sky Island
Velvet Smile	Smile Maker × White Velvet	Hausermann
Venosasp	*speciosa* × *venosa*	M. Kobayashi
Ville du Port	Sanguine × Chambord	Marcel Lecoufle
Vincent Naab	Evangeline × Snow Swallow	Worldwide (Today Trop. Nurs)
White Chablis	Joseph Hampton × White Velvet	Hausermann
White Lei	Hawaiian Queen × Hawaiian Snowfall	Sky Island (O/U)
Willi Rössler	Schaumburg × Carmela's Pixie	Röllke Orchzt.
Windsong's Desire	Ruth Harpstead × Donna Niesen	Windsong

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Wyche's Red Lip	Lady Kaala × Verlaine	Worldwide (L. Poole)
Yellow Devil	Ambo Imp × Deventeriana	Sky Island
Yolanda Sanchez	Purple Royale × Kenneth Rudolph	Hausermann
Zonta Seventeen	Spitzberg × Doctor Klaus Beisenherz	David Lim
PHRAGMIPEDIUM		
Coral Jewel	*sargentianum* × *schlimii*	Kilworth
Corbiere	Calurum × Eric Young	E. Young O.F.
Louis Hegedus	*wallisii* × *caricinum*	A. Mochizuki
Patti MacHale	*pearcei* × *sargentianum*	P. MacHale (O/U)
PLEIONE		
Pocahontas	*formosana* × Firecracker	M. Hazelton
Shogun	Versailles × *chunii*	M. Hazelton
POTINARA		
Andrea May	*Lc.* Amber Glow × *Pot.* Susie's Glow	D. Springman
Barbara Hausermann	*Blc.* Port Royal Sound × *Slc.* George Hausermann	Hausermann
Dux	*Slc.* Rosemary Clooney × *Blc.* Yellow Buttons	D. Neuendorff
Elizabeth Thurber	*Blc.* Waikiki Gold × *Pot.* Morning Magic	Stewart Orch.
Glenlee Doll	*Slc.* Precious Stones × *Blc.* Makaha Gold	R. Bills
Hizagawa Ruby Tokuzato	*Slc.* Precious Stones × *Bc.* Maikai	S. Tokuzato
Ingénue	*Blc.* Malworth × *Pot.* Fortunes Peak	E. B. Horton
Lucas West	*Pot.* Estelle Smith × *Lc.* S. J. Bracey	E. B. Horton
Malvarosa Bet	*Pot.* Malvarosa Joy × *C.* Bob Betts	Malvarosa
Morning Love	*Blc.* Love Sound × *Slc.* Morning Glow	Dogashima
Or de Valec	*Blc.* Malworth × *Pot.* Farrell D'Or	Vach. & Lec.
Sweet Beauty	*Slc.* Beaufort × *Pot.* Sweet Sugar	Minoru Ind. (Y. Ikumoto)
Torie Nawa	*Pot.* Afternoon Delight × *Slc.* Hazel Boyd	Hausermann
RENANTANDA		
Robsan	*V.* Ruby Prince × *Rntda.* Gold Nugget	R. Perreira
Truman Monroe Motes	*Ren. imschootiana* × *V.* Paki	Motes
RENANTHERA		
Fire Coral	*philippinensis* × *isosepala*	Suphachadiwong
RENANTHOPSIS		
Tjahaja Ningsih	*Rnthps.* Peggie Hong × *Ren. storiei*	Y. Alsagoff
RHYNCHONOPSIS		
Seletar Jewel	*Phal. laycockii* × *Rhy. coelestis*	David Lim
RODRIGUEZIA		
Whitewater	*venusta* × *leeana*	W. Savage (Richella)
ROLFEARA		
Starlight Empress	*Bc.* Nodata × *Sc.* Beaufort	Minoru Ind. (Y. Ikumoto)
SARCOCHILUS		
Cherie Snow	Cherie × *hartmannii*	Kevin Wilson
Davey Woolf	Fitzhart × *weinthalii*	Florafest
Fred Conway	Michael Derham × Fitzhart	Florafest
Jeanne	Weinhart × Fitzhart	Kevin Wilson
Karen	*aequalis* † × *falcatus*	Simpson Orchids
Kelunji	Melba × Mavis	Simpson Orchids
Otways Gem	Marion × *australis*	Florafest (L. Fagg)
Pindan Spots	Mavis × *weinthalii*	Simpson Orchids
Pixie Dust	Cherie's Wine × *fitzgeraldii*	Florafest
Redstone	Cherie × Elizabeth	Kevin Wilson
Tarnie	Weinhart × Heidi	N. Roper
* *SIEGERISTARA (Sgrt.)*		
Emly's Delight	*Crphm.* Emly Siegerist × *Trias disciflora*	Suphachadiwong
SOPHROCATTLEYA		
Doktor Klaus Eistetter	*Soph. mantiqueirae* × *C. violacea*	D. Flockerzi
Royal Blush	*C. violacea* × *Sc.* Beaufort	Tropic 1
SOPHROLAELIA		
Erich Roth	*Soph. mantiqueirae* × *L. sincorana*	D. Flockerzi
Lotte Roth	*L. gloedeniana* × *Soph. mantiqueirae*	D. Flockerzi

NAME	PARENTAGE	REGISTERED BY
SOPHROLAELIOCATTLEYA		
Acme	*Slc.* Octoberfest × *L. bradei*	Acme
Atomic Cocktail	*Slc.* Tangerine Jewel × *Slc.* Pumpkin Festival	D. Neuendorff
Beautiful Art	*Slc.* Jeweler's Art × *Sc.* Beaufort	Minoru Ind. (H. Kondo)
Beautiful Bounty	*Sc.* Beaufort × *Lc.* Irene Finney	Minoru Ind. (Y. Ikumoto)
Cosmo-Rag	*Lc.* Pink Favourite × *Slc.* Tiger Rag	Kokusai
Drum Burst	*Slc.* Rocket Burst × *Lc.* Drumbeat	Minoru Ind. (Y. Ikumoto)
Emilee Nawa	*Lc.* Little Sweetheart × *Sc.* Calypso	Hausermann
Fluo de Valec	*Slc.* Hazel Boyd × *C. walkeriana*	Vach. & Lec.
Inge Sperr	*C. luteola* × *Slc.* Jewel Box	Röllke Orchzt.
Katie Banks	*Slc.* Pearl Spencer × *Lc.* Copperglen	Sea God Nurs.
Leopard Lou	*Slc.* Precious Stones × *C.* Penny Kuroda	J. Rehfield (Rod McLellan Co)
Lucky Chance	*Lc.* Tokyo Magic × *Sc.* Beaufort	Dogashima
Magic Power	*Slc.* Rimfire × *Sc.* Beaufort	Dogashima
Matthew Salzman	*C.* Intermediette × *Slc.* Anzac	A. Salzman
Misaki Brightly	*Sl.* Psyche × *C.* Sound of Silence	N. Taki (Yoshitaka Yamamoto)
Napalm Sunset	*Slc.* Tangerine Jewel × *Slc.* Napalm	D. Neuendorff
Rocky Clough	*C. bowringiana* × *Slc.* Rimfire	G. Carr (R. Clough)
Tropical Breeze Tokuzato	*Slc.* Precious Stones × *C.* Porcia	S. Tokuzato
Twilight Love	*Lc.* Rojo × *Slc.* Madge Fordyce	Dogashima
Zadig de Valec	*Lc.* Gold Digger × *Slc.* Vallezac	Vach. & Lec.
SPATHOGLOTTIS		
Angelina	Premier × *chrysantha*	D. Hobden
Premier	Primson × Doctor Yeoh	T. Hobden (Singapore Bot. Gdns.)
Vi	Premier × Primrose	T. Hobden
STANHOPEA		
Jungle Cat	*longipes* × *tigrina*	D. Pulley
Zephyr	*intermedia* † × *graveolens* †	D. Pulley
VANDA		
Chad Whetstone	Manuel Torres × *coerulea*	Motes
Fuchs Summer Skies	Pimsai × Manuel Torres	R. F. Orchids
Fuchs Twilight Gem	Fuchs Delight × Jimmy Miller	R. F. Orchids
Heure Bleue	Valse Bleue × *coerulea*	Marcel Lecoufle
Meg Laughlin	*tricolor* × Motes Honeybun	Motes
Mood Indigo	*tricolor* × Motes Indigo	Motes
Motes Damask Rose	*tricolor* × Robert's Delight	Motes
Motes First Light	*lamellata* × Rasri Gold	Motes
Motes Key Lime	Rasri Gold × *dearei*	Motes
Motes Mosaic	*tessellata* × Motes Indigo	Motes
Motes Pied Piper	*luzonica* × Motes Indigo	Motes
Motes Pink Bubbly	*tricolor* × Chalermchai	Motes
Motes Pink Cadenza	*luzonica* × Chavananand	Motes
Sally Roth	*coerulescens* × *coerulea*	Motes
Shades of Gold	*lamellata* × Phetchaburi Gold	Motes
Siam Delight	Dona Rome Sanchez × Kinzweiler	Suphachadiwong
Thai Jewel	Rung Roeng × Renton Hutchison	Suphachadiwong
Thailand Delight	Robert's Delight × Kinzweiler	Suphachadiwong
Yeo Wenshan	Colorful × Eisenhower	Koh Keng Hoe
VUYLSTEKEARA		
Plum Fancy	*Oda.* Stromar × *Milt. spectabilis*	Orchid Zone (Robert Hamilton)
Terry Kennedy	*Vuyl.* Cambria × *Odm. crispum*	A. Salzman
Warway	*Milt. warscewiczii* × *Oda.* Lingway	H. Rohrl
WILSONARA		
Bonne Nuit	*Onc. sphacelatum* × *Oda.* Eric Young	E. Young O.F.
Eva	*Wils.* Intermezzo × *Odm.* Hans Koch	K. Krieger
Russiker Tiger	*Wils.* Hambühren Stern × *Odcdm.*Tiger Butter	J. Isler
YAMADARA		
Golden Glow	*Eplc.* Merrilee × *B. glauca*	H. Wallbrunn

*New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Aganax = *Aganisia* Lindley × *Colax* Lindley
Elecalthusa = *Arethusa* Linnaeus × *Calopogon* R. Brown × *Eleorchis* F. Maekawa
Euclades = *Eulophia* R. Brown ex Lindley × *Oeceoclades* Lindley
Siegeristara (named in honour of Emly S. Siegerist of Missouri, USA) = *Bulbophyllum* Thouars × *Cirrhopetalum* Lindley × *Trias* Lindley

‡Natural genus new to registration:
Oeceoclades Lindley

NAME	PARENTAGE	REGISTERED BY

†Species appearing for the first time as parents in registration:
Bulbophyllum eublepharum; Cirrhopetalum gracillimum; Cirrhopetalum lepidum; Cirrhopetalum mastersianum; Cirrhopetalum medusae; Dendrobium cumulatum; Dracula wallisii; Galeandra lacustris; Galeandra leptoceras; Gongora truncata; Laelia bahiensis; Lepanthopsis astrophora; Lycaste bradeorum; Lycaste trifoliata; Masdevallia hercules; Masdevallia hymenantha; Oeceoclades cordylinophylla; Sarcochilus aequalis; Stanhopea graveolens; Stanhopea intermedia

CORRIGENDA – Orchid Review list of:
September/October 1994, *Paph.* Winverson: seed parent should read Jim Iverson
September/October 1994, *Phal.* Lunar Sensation: seed parent should read Moonlit Snow
September/October 1994, *Rnthps.* Shim Phyau Feh: seed parent should read *Ren. storiei*
September/October 1994, *Slc.* Coral Lady Tokuzato: registrant should read S. Tokuzato
November/December 1994, *Dvra.* Joanne Lalli: pollen parent should read *Ascda.* Aroonsri Beauty
November/December 1994, *Rodricidium* Bicba: should be *Rodriglossum* Bicba
January/February 1995, *C.* Cynthia Martel Utuado: pollen parent should read Guatemalensis
January/February 1995, *Den.* Beenana: seed parent should read Madame Chuli
January/February 1995, *Dtps.* Vibrant Star: registrant should read Hausermann
January/February 1995, *Lc.* Diaforb: pollen parent should read *L. angereri*
January/February 1995, *Lc.* Velutake: delete, registration withdrawn September 1995. Cross now registered as *Lc.* Estrella de Otoño (see list above)
January/February 1995, *Oda.* Billy's Delight: pollen parent should read *Odm.* Conperry
January/February 1995, *Oncda.* Orange Cloud: pollen parent should read *Cda. noezliana*
January/February 1995, *Paph.* Shah Alam: pollen parent should read Docteur Knock
January/February 1995, *Slc.* Lena Grezaffi: pollen parent should read *Slc.* Persian Garden
March/April 1995, *Blc.* Pastel Pageant: seed parent should read *Blc.* Pamela Hetherington
March/April 1995, *Onc.* Plum Wine: seed parent should read Little Chickadee
May/June 1995, *Paph.* Akinotsuki: seed parent should read Chardmoore

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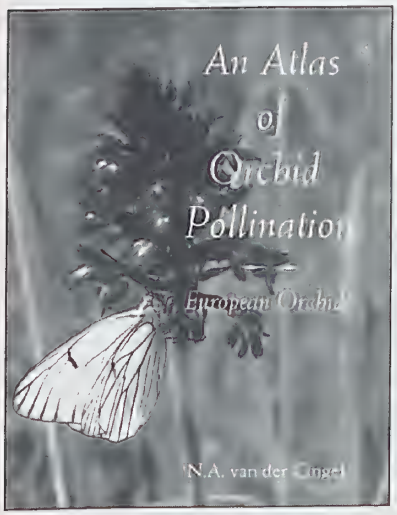
An Atlas of Orchid Pollination — European Orchids

N.A. van der Cingel
A.A. Balkema, P.O. Box 1675, 3000 BR Rotterdam, Netherlands
175pp. Hardcover 285mm x 208mm
123 colour plates; 120 B&W
ISBN 90 5410 190 3
$US 85.00

I enjoyed reviewing this book, mainly because it has so much to offer the reader who is interested in this all encompassing subject, and the fact that it is easy to read.

Although the book is basically focussed on European orchids, the principle of orchid pollination is the same the world over, and this book dispels the secrets and presents the facts in a straightforward way. It is written in a coherent manner, with a minimum of biological jargon. If you are seriously interested in the production of orchid seed this book is for you.

After discussing "Why this Book?" and then in the introduction, "The Mystery of Orchidiocy", in which the author states " . . . orchids



are inextricably linked with sex and eroticism"; we move on to Part One.

This part is quite essential for anyone who wishes to partake in the fundamentals of seed raising, whether the orchids be European or Australian.

Chapter One is "The History of Orchid Pollination" covering the general history of plant sexuality as well as its pollination history.

Chapter Two, "The Evolution of Orchid Pollination", starts off with 'The Fossil Record', this includes a picture of the oldest fossil orchid *Eoorchis miocaenica*'; then flows freely through adaptation and relationship, origin of the orchid flower on to evolution conditions and co-evolution, in which it is stated "The interdependency between orchids and pollinators is such that the evolution of one may influence that of the other". This chapter closes with non-flower characters determining evolution.

Chapter Three, "The Morphology of Orchid Pollination" includes the morphology of the pollinator as well and is followed by a most interesting chapter on "The Typology of Orchid Pollination" which very clearly sets out the numerous characteristics that comprise the various pollination syndromes — bee, moth, fly and beetle as well as deceit flowers, mimicry and shelter simulation. Many specifics on European Orchids are mentioned but our Australian *Cryptostylis leptochila* gets a mention with regard to pseudocopulation between pollinator and orchid.

Next we move on to "The Mechanics of Orchid Pollination", explaining resupination, an important factor in the study of pollination, followed with the deposition of the pollinaria, the movement of the labellum as well as the movement of the pollinia in self pollination. This kind of reproduction is clearly described, self pollination is quite common among numerous Australian native orchids.

Chapter Six explains "The Chemistry of Orchid Pollination" by way of nectar, fragrance and the scents. The next three chapters deal with the mathematics, animal behaviour, economy of foraging behaviour of pollinators, etc., in pollination.

Chapter Ten is an all important one, "The Genetics of Orchid Pollination". A clear insight into the laws and facts of genetics. the genepool is explained together with genetic variation, drift etc. The Australian native *Leporella fimbriata* was used to illustrate the research being carried out on variance. Pollen flow is discussed using *Prasophyllum fimbria* from Australia as the model. Hybridisation and pollination dynamics conclude this chapter.

The last three chapters in Part One deal with research methodology, a comprehensive glossary and the taxonomy of orchids.

Part Two is the Systematic Account and provides the specific information on the pollination of any European orchid. The text is supported by many drawings and goes into considerable detail for each species in a most orderly manner. The 123 excellent colour plates in this part show much of the pollination action. The book is worth buying for these pictures alone. The *modus operandi* of the pollination, in most species, is given, not only in great detail, but in a very simple and understandable form. There is more in this book, than in any other, about the pollination of a particular areas orchids, or for that matter any other book on pollination.

The references at the rear, give a great insight into further reading on the subject. Even the index is in four parts, or should I say there are four indices — 1, of plant names, 2, of insect names (pollinators and visitors), 3, of persons, 4, of subjects.

All in all, I enjoyed this book and it should be on the bookshelf of every serious orchid enthusiast.

Walter T. Upton

Organic Gardening

Peter Bennett
National Book Distributors and Publishers
212 pp. Softcover, colour
ISBN 1 86436 0437
RRP $A24.95 from Angus & Robertson only.

This book is full of interesting information on Organic Gardening which Peter Bennett shares with the reader in an easy to access style complemented by many colour illustrations. It contains the design principals that will be required if we are to realise truly sustainable agriculture and horticulture in the twenty-first century.

It is a fascinating book with a wealth of information on such topics as companion planting, the role of insects in the food cycle, and the importance of bird baths and nesting boxes. Further valuable information shows us how to grow our own fruits, vegetables and flowers and when to plant and prune then, composting methods, fertilisers and poisons.

Peter Bennett's approach to Gardening and agriculture is the same: eliminate or reduce chemical fertilisers and pesticides, build a healthy soil biomass in which roots, worms, fungi, moulds, bacteria and viruses abound, look after the trees and animal life and build a sustainable fertility system capable of producing vegetation of the highest nutritional quality.

The whole picture of how our gardens and farms could look "organically" becomes clear.

This edition of Peter Bennett's authoritative tome offers an updated review of organic agriculture and horticulture, it has the potential to open the door of awareness to, and help provide a core life purpose for, a new generation of gardeners.

This book is suitable for all growers and garden lovers.

From armchair to the specialist, balcony to the farm. It is an essential reference book and would be a valuable addition to any garden library.

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AOR 111

Cattleyas

By now the autumn flush has gone and we are now seeing some of our winter flowering catts. To get the best out of the winter flowering cattleyas one must have a heated glass house if you live south of Coffs Harbour. Some people around Newcastle and Sydney flower them very well without heat, but they are the lucky few. The heated house must have plenty of light and well ventilated. Try and keep the night temperature around 10-12 degrees celsius. Remember the day temperature must rise higher than the night temperature or you will upset the plants metabolism.

During the day open up all vents unless it is cold and windy, or vents on the non windy side. If you don't the house will become stale and stuffy.

Watering weekly should be sufficient this time of the year. Only water early in the mornings and only on sunny days. Always give your plants a good soaking when you water to flush out all of the undissolved salts.

As most plants are either dormant or in bloom they will need very little fertiliser. If in bloom or coming into bloom K-D-L seems to give the blooms that little bit of an edge. Seedlings should be kept moving. A weekly application of your favourite fertiliser will keep your plants moving as long as the weather does not get too cold. I like to use an organic this time of the year on my small *Cattleya* seedlings. Two of the best organics around at the moment would be SPRAYTECHS FISH EMULSION or the famous GARDEN PARTY®. Remember GARDEN PARTY® should be used at 3ml/litre on your seedlings. Don't forget to keep your seedlings damp at all times, do not let them dry right out. But remember do not keep them saturated.

Cymbidiums

Winter is now here. Long cold nights and short cool days. Cymbidiums are now coming into bloom. Through the work of our hybridisers our cymbidiums are now coming into bloom earlier every year. Not so many years ago early blooming cymbidiums were either green, pale pinkish or muddy whites of doubtful shape and lasting properties.

In New South Wales Alvin Bryant, Neville Schaefer, John Gulbis and Alan Merriman have worked very hard over the years to produce a range of colours that flower from Mothers Day to the peak season of September. Today these earlies are of good shape and have good depth of colour. Their lasting properties are now as good as mid season bloomers.

Every year around this time it is good to see some of these first flowering seedlings flowering at Orchid Societies winter shows. I recommend to all cymbidium growers to buy a few seedlings every year. The nurseries that advertise in the A.O.R. can guide you in the right direction as to what to buy to suit your flowering needs — be adventuresome — buy a few seedlings this year. Remember — mericlones are at least five years old before you buy one, and then remember — every one can buy a clone, but your seedling is yours and yours alone.

Winter brings a few cultural problems. One must watch the watering. This is very important. Keep your flowering plants just moist — not over wet. Water only on sunny mornings. If the weather is kind weekly watering should suffice. If your flowering house is heated you will have to water more often. Plants in the growing house will have to be watched carefully as foul weather will upset your watering programme.

Flowering plants should be fertilised weekly with a good soluble fertiliser such as Horticultural Solutions HSO 12. Use it at the rate of one gram in one litre of water. Each plant should receive around 500mls per 200ml pot.

Non flowering plants in the shade house should also receive their weekly supply of nutrients. Your seedlings should be kept moving right through the winter. If you are an organic grower you can use GARDEN PARTY®, FISH EMULSION or possibly HSO 22.

If you live in a frost prone area the use of ENVY® will help the plants to overcome the effects of frost. Remember ENVY® only helps — it can't make a plant withstand temperatures down to minus ten or so!!!

Don't forget to keep your flowering racemes going up nice and straight. DO NOT try and stake them early in the mornings or you may snap them off!! If you use steel stakes make sure they are clean and sterilised. A soak in STERRI KLEEN® will help to eliminate virus from the stakes. Never use second hand bamboo stakes as they may be virus infected.

Hang your yellow insect traps in your flowering house to monitor insect pests. Inspect weekly to see if you need to spray for pests. If you prepared your plants against *botrytis* infection before flowering you should not have any problems. If a problem occurs you may have to spray with ROVRAL AQUA® or possibly BAVISTIN®. Please check label to see if legal to use in your state as registration varies from state to state.

For those cymbidium growers who enjoyed reading Graham and Sue Guest's book on cymbidiums will be delighted to know that they have released another. This new edition is called **"MORE CYMBIDIUMS"**. There are nearly one hundred pages on many new subjects not covered in their first book. The colour plates are superb. The writing is in the same style as their first book.

If you are serious about cymbidiums you should be serious about getting your copy of **"MORE CYMBIDIUMS"** (available from Miriam Ann Orchids for $27.20 posted). The colour plates are worth the money!! My choice is plate 3 Fair Delight 'Polar Bear' or maybe plate 28 Lovely Angel 'The Two Virgins'.

If you happen to be around the Gosford area on the 29th or 30th June, drop into the 10th Annual Central Coast Orchidfest. It will be held at Royale Orchids, 1360 Brieses Road, Peats Ridge. Peats Ridge is an easy 1 hour drive north of Sydney along the F3 Freeway. The turn off to Peats Ridge is just past Mount White at the Calga Interchange (sign posted). There will be many nurseries exhibiting their wares including many with the latest *Cymbidium* crosses. If you want to up date your *Cymbidium* collections come along and buy a few of the latest *Cymbidium* hybrids. The Fair will be open from 8.30am to 5pm on both days. Lunch and refreshments will be available on site.

Well this is all for now. Keep those cymbidiums growing. Enjoy those beautiful blooms!

Masdevallia/Dracula

For most areas of Australia, where *Masdevallia/Dracula* are successfully cultivated, now is the time to start looking for evidence of a good Spring to early Summer flowering. Many buds can now be seen poking their heads up, through the sheaf which surrounds the ramicaul, or the bottom part of the leaf. Keep this area clear of water lest the buds be lost due to rotting off. Sometimes as well, the bud may not be able to properly emerge and some careful slitting with a razor blade may be necessary to release it. Possibly in some areas, *Masd. veitchiana* is already in bloom and of course, this favourite flowers on and off throughout the year.

As temperatures drop and the rains hopefully begin for most of us, it is time, if you have not done so, to move your plants out of their Summer/Autumn positions. *Masdevallia/-Dracula* are no different from other orchids, in that they do not take kindly to being wet and cold, for months at a time. Winter solid cover should be in place by now. Plants can continue to grow rather vigorously at this time, so fertilisers, albeit gentle, can be included at every watering. Late Autumn weather in the southern states and northern tablelands, approximates very closely the climate from the habitat as it is during most of the year.

Watering frequency should be reduced, however. In the south, shade cloth should be removed so as to take advantage of Winter light. No light, poor flowering! Should you be growing any species from the lower Andean altitudes, it is time to think about a little bottom heat to keep them going through the Winter. 8 to 10 deg. C. at night should be absolute minimum for these cold sensitive orchids. The application of a Natriphene spray at recommended strength for orchids, may assist at this time. During our Winter, I NEVER water during periods of naturally high humidity. I have learned from observation in the habitat, that even *Masdevallia* are able to withstand short periods of dryness without harmful effect as long as humidity is always high. Let's say a minimum of 60% RH.

Sudden spotting or dropping of leaves suggests that it is too cool and this is the plant talking, to you, as well as advising that a little bottom heat, would be appreciated. Section *Occillantes* is at risk from the cold and many *Dracula* will spot their foliage rather badly if constant temperatures in the lower regions prevail for long periods. Cool nights are not a problem but little temperature increase during the daylight hours, over an extended period will see a decline in the health and vigour of many plants. Try to arrange things so that a 20 deg. C. day is possible. As always, air movement is as important now as it is in other seasons. KEEP THOSE FANS ON!

Dracula are one of the most vigorous of all the Pleurothallids and it is rare to see them give trouble in culture. Water quality may be a cause of foliage spotting and leaf tip die back. I have constant spotting with *Drac. gorgona* and suspect modern additives courtesy of the water board for causing this.

Flowering Draculas of course is a different matter, observe cause and effect and all will ultimately fall into place. They are certainly worth the small amount of extra trouble and new techniques that may be required of

them. Well flowered examples of Dracs. *vampira, wallisii, simian* or *chestertonii*, that's the one with the huge lip, are sights may people will never see unless they are grown, or should I say saved, by enthusiasts and conservation minded growers who are mindful of the rape and destruction of natural habitats.

The future of many species, unfortunately lays with artificial propagation techniques. Within our life time many of the gems we grow in our collections will disappear from their natural habitat.

Now gone are the ecosystems of many, and as orchids can be very fussy about their growing environment, even in the country of origin, exact duplicates of micro climates can be difficult to find. It will always be preferable to leave the plants where they are and where they have evolved for certain sets of conditions, over the many thousands of years. Try and tell that to a land owner who wants to burn and slash, to grow corn and graze cattle through!

Because of the fact that many species may be endemic to areas of only a kilometre or so square, in the destruction of the habitat, we may be witnessing the extinction of many species. Our responsibility as dedicated and concerned growers, is to acquire and cultivate as many of these plants as possible, lest they be lost for all time!

Make sure you keep the snail/slug baits around at the moment, or all the good work will disappear in one night! Mesurol is a good bait if you can find it although nothing beats a good solid boot before you retire for the night, especially if it has been raining.

Natives

By now we are well into winter and winter culture. Some areas had an early start with frosts in April where they are not the norm — just a reminder that we are at the mercy of nature and need to be prepared for extremes of weather. The cold nights will have sent those who need heaters scurrying for them.

This is the time of year when many collections are seen by their owners only at weekends or by torch-light. The torch can have advantages as you might be surprised what you can catch munching away under cover of darkness!

Winter culture in cooler areas means protecting your plants from the expected minimum of your area (minus a few degrees if you are cautious). Many of our native orchids originate in the temperate areas and will tolerate temperatures to -1 or -2°C with no ill effect. In fact, some, such as *Dendrobium falcorostrum* and *D. kingianum* need low temperatures to initiate flowering. This is the reason that they do not flower in warmer areas. Most of the commonly cultivated cool-growing orchids are descendants of plants found in rainforest or along well-treed streams where, although their niche may be shaded, damp and quite cold, they are protected from exposure to the severity of frost. It is frost which does the damage to these plants. Many dendrobiums are quite tough but the Sarcanthinae are not at all frost hardy although many are tolerant of low winter temperatures. In many areas shadecloth is quite adequate protection.

The advantages of a thoughtfully positioned large tree or two in a backyard can more than outweigh the disadvantages. They must be evergreens, of course, and should be positioned so as to provide overhead cover in winter to protect from frost. Ideally they will be on the southern or southwestern side of the bushhouse so that winter sun will not be blocked but the hottest summer afternoon sun will be.

Wind protection will help keep temperatures up by reducing wind chill — a very important consideration in some areas. But frost doesn't settle in windy conditions. Take care with wind protection that a stagnant atmosphere is not created as this will then create problems with fungal and bacterial infections and give insects an easier time. Again plants are a good solution, this time in the form of a windbreak. The right plants can reduce strong winds to gentle air movement.

Water plants in the morning over the cooler weather. This allows the potting mixture to dry out a bit and any droplets to evaporate before the cold of night. The frequency of watering will depend on your conditions and the prevailing weather but plants seem to me to be better off if left a bit on the dry side over winter. Remember that small amounts of water can go from very hot to very cold depending on the conditions. Rain does not seem to be a real problem and wet weather is, at least, frost free.

Frost damage shows up a day or two after exposure as brown or white patches on the flat highest leaf surfaces. There is nothing you can do to reverse the damage only remove the affected leaves and wait for new growth. I suggest leaving them on the plant to protect undamaged leaves next time and remove them when warmer weather arrives. Keep a watch that fungal infection does not invade the damaged tissue. In really bad cases the leaves will drop and the pseudobulb may be damaged and need removing too.

What about plants which won't tolerate the expected minimums? Most growers are just not content to have plants which originate from similar climates but want those lovely tropical blooms as well. If you are one of these growers (face it, most of us are) a heated house will be required once you have too many to cope with successfully indoors. Traditionally these are glasshouses but a thin layer of glass has poor insulating properties compared to some of the plastic materials now on the market. These plastics are more resistant to impact of hail, branches and cricket balls and are easier to handle. They may also be cheaper. Some consist of two layers with an air pocket which provides excellent thermal insulation. Many plastics also diffuse sunlight on bright days so leaves won't get fried. In some areas it is quite possible to provide enough winter protection for what are termed intermediate plants with an unheated plastic-covered house. Such a house may be necessary in some areas to grow cool growing natives. Shadecloth covered bushhouses are something those of us in warmer areas take for granted.

If you are in a cold area or insist on growing true tropical delights, a heater is needed. The most common form of heater is electric and this is controlled by a special thermostat. Beware of using gas, oil or kerosene heaters as some of the products of combustion can be quite toxic to plants. Once plants are enclosed in a windproof environment a fan is needed to circulate air and imitate the natural environment. Careful attention needs to be paid to humidity as heaters dry the air. A large tray of water is useful. Also mealy bugs can be a major problem in dry conditions.

Growing tropical plants in cooler regions often proves more trouble than it is worth. While a plant may grow reasonably well it can often be impossible to achieve a good display at flowering. This is due to the fact that there are simply not enough hours of sunlight in southern areas. There are now many hybrids on the market which have some tropical species in their parentage and therefore have exquisite blooms but are tolerant of relatively low winter temperatures (around 5°C). Many remain in bloom for extended periods due to the presence of both spring and autumn flowering species in their parentage. These are a sensible alternative to the species.

Over winter the spring flowering dendrobiums and many Sarcanthinae have actively growing flower spikes. Watch that aphids don't snack on them. Take care when handling the plants as these are quite brittle.

Not many of the epiphytes bloom in the winter months. *Sarcochilus* Southern Cross is one hybrid I have noticed with an extended flowering time which may start in late winter. *Dendrobium teretifolium* and *D. curvicaule* may also bloom this early. Many others will have flowers open by mid August, particularly if there is an early warm spell.

Many species of "southern" terrestrials bloom over the winter months. While most are difficult to impossible to maintain in cultivation or provide little reward for maximum effort there are some species and hybrids which have proven quite amenable to captivity. *Pterostylis nutans* and *Pt. curta* are frequently suggested as beginners' terrestrials.

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AOR 018

Paphiopedilums

Paphiopedilum hybrids are well into their flowering season. Most of the whites and early greens will be in flower, together with some of the coloured varieties. Many of the modern hybrids, particularly those with spotted flowers, will not flower until spring. Flower quality depends upon several factors: those under your control at this time of year are watering, feeding, staking and light.

During winter paphiopedilums do not require frequent watering. Whilst the actual frequency will depend upon the weather, the type of housing and the state of the potting mixture, you must resist the temptation to pick up the hose unless the plants are moderately dry. When you do water, water early on a sunny day and water thoroughly. After every third or fourth watering allow the plants to drain for half an hour or so and then water with weak Aquasol (about half strength).

Staking is important if you want to avoid asymmetrical flowers. Try to encourage the stems to grow upright from the start. You will be able to support the growing stem with a loose tie a couple of inches or so below the bud. When the stem is fully grown and the bud about to open, lean the pot forward about fifteen degrees or so and keep it in this position until the flower has been open about a week; this will cause the flowers to "look up" a little.

Adequate light is very important for quality flowers. If at all possible, the amount of shading should be reduced considerably from mid-May until early September. This will result in larger, brighter flowers and longer — yes, longer — stronger stems; the plants will also benefit by continuing their growth cycle, albeit at a slower rate, through the winter months.

Although potting is best left until spring, any plant which is not doing well should be repotted into fresh mixture as soon as it is noticed, no matter what the season. If the roots have rotted away, dip the "bare rooted" plant in Fongarid and stake it firmly.

As a general rule the green-leaved hybrids can be grown quite well in cold conditions provided they are protected from heavy frost. Those with heated glasshouses do not need more than about six degrees centigrade, although young seedlings will benefit from somewhat warmer conditions. Maudiae types are really warm growers and require about fifteen degrees to do well.

Phalaenopsis

Watering:— Water *only* in early mornings every 3 or 4 days depending on the weather. If possible, water mainly in pots and not the foliage. Do *not* allow water to remain in the crown overnight as this can cause rot. Avoid watering at all on cold or bleak days.

Light:— Still require more shade than other genera although can be reduced to 70% during winter.

Fertiliser:— Reduce fertilising to once per fortnight, alternating between —

(1) Inorganic low nitrogen — Campbells A, Aqua K or Phostrogen.

(2) Wuxall or Fish Emulsion.

Pest Control:— Spray with fungicide every 6 weeks. e.g. Daconil, Ridomil MZ WP or Mancozeb with Kocide.

Use Diazanon or Pyrethrum to control scale and insects.

Keep a close watch for *Phalaenopsis* mite and treat with a miticide as required.

Vandaceous

Watering:— Cut back on watering during cooler months. Depending on local conditions, a good watering every 3 days should be sufficient. Water only in the morning. Avoid watering at all on cold or bleak days.

Light:— Strap leaf vandas and ascocendas require 50% shade. If you wish to move narrow leafed vandaceous plants (i.e. terete and semi-terete vandas, Mokaras, Arandas, etc.) from a shade house to full sunlight, then now is a good time to move them.

Fertiliser:— Reduce fertilising to once per fortnight alternating between —

(1) Inorganic low nitrogen — Campbells A, Flowfeed HP8, Aqua K or Phostrogen.

(2) Wuxall or Fish Emulsion.

Pest Control:— Spray with a fungicide every 6 weeks e.g. Daconil, Ridomil MZ WP or Mancozeb.

If insects or scale are a problem spray with Diazanon or Pyrethrum.

Watch for mite damage (i.e. Red spider, false spider, etc.) and treat with a miticide such as Kelthane or Tedion.

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The Cymbidium Club of South Australia's (CCSA) judging system is designed to identify plants that are *easy to grow and easy to flower—with quality flowers and lots of them.* The ***Commendation for Excellence,*** CE/CCSA, is for excellent quality similar to the AD, HCC or AM awarded by the Australian Orchid Council. The ***Commendation for Special Merit,*** CSM/CCSA, goes further—it is only awarded to a plant which has been awarded a CE on its previous flowering. To gain this award the plant on its second presentation to the judges of the CCSA must have *good vigorous growth and a better flowering than on its first presentation.*

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Willunga Regal 'Midnight' CE, CSM/CCSA
(Kiata x Ruby Eyes) Possibly one of the darkest small intermediate sized blooms on erect arching spikes carrying over 15 blooms. A dark plum to black shade.

Solana Fascination 'Amethyst Glow' CE/CCSA
A brushing of dark pink to mauve over all the segments which are of a white background colour—a fine standard *Cymbidium.* **CCSA Cymbidium of the Year 1993.**

Volcanic Flash 'Tim Tam' CE, CSM/CCSA
Tall erect spikes of bright chocolate intermediate sized blooms with distinctive red barred lips. **CCSA Cymbidium of the Year 1991.**

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Cymbidiums Australia



Presented by the Australian Cymbidium Society Inc

Editor's Report

Cymbidium Smorgasbord

In this issue of Cymbidiums Australia we present a smorgasbord of goodies for cymbidium lovers. Crammed full of interest packed articles and relevant information, what better way than to kick off with President Graham Guest revealing details of our inaugural Show.

This undoubtedly will be an event no cymbidium buff would wish to miss and I am looking forward to meeting you all at Ararat.

Throughout the world exciting new seedlings are being flowered by hobbyists and hybridists. The challenge to attain perfection continues to lure and elude those who seek it — yet the disciples of hybridising continue to increase as they cast the net in an ever widening search for "Cymbidium Utopia".

It is important that we continually evaluate the results attained by various stud plants. Cymbidiums Australia will endeavour to keep you informed. This month Kevin Butler from Ezi-Gro Orchids in Western Australia tells of the results he has achieved using *Cym.* Alegria 'St. Lita'.

Has the article, "Dr. Miles Seton's Quest . . . Summer Flowering Cymbidiums", published in the last A.O.R. aroused interest in our Australian species cymbidiums? Let's hope it has.

Kevin Western tells of a second generation *Cym. canaliculatum* hybrid, which poses the question, "How much breeding has been done with *Cym. canaliculatum* and what results are there to show for it?" If you have a story to tell, or pictures of such results, please feel free to send them to me for publication. I'm sure the latest results of the breeding being done with our Australian species have not been documented — let's do something about it!

Among the most pleasant and rewarding duties performed during my term as Cymbidium Club of S.A. President, was inviting Andy Easton to be Club Patron and extending to him an open invitation to be After Dinner Speaker at the Club's annual Spring Show mid-week Gala Dinner. Our Club was delighted and deeply honoured when Andy accepted both requests.

A profile of Andy Easton and his life-time involvement with orchids makes compelling reading. Sue Guest brings you this informative story about one of the great ambassadors for cymbidiums. Andy Easton captures the attention of audiences world-wide, with both his orchid knowledge and the sincerity with which he passes it on.

Are you having problems with scale on your plants? In this issue Glenn Heylen brings us up to date on these "critters". This is the first of regular feature articles directed towards specific cultural advice. A panel of renowned cymbidium growers have offered their services to write about their experiences on a host of cultural topics. ■

Dean Roesler
Editor

"CYMBIDIUMS — KING OF THE ORCHIDS"

President's Report

Our Inaugural National Show

The feedback I have received following publication of the 1995 Sage Cymbidium of The Year Awards in the April 1996 A.O.R. has been tremendous — indicative of the resurgence in interest in this wonderful orchid. To follow on, I commend to all enthusiasts attendance at the Australian Cymbidium Society's inaugural National Show over the weekend of the 7th and 8th September 1996.

Where? – This showcase in proudly sponsored by The Rural City of Ararat, and will be staged in the spacious Ararat Town Hall, Barkly Street, Ararat, Victoria. This regional centre has been selected given the considerable sponsorship being provided by the City of Ararat, and its proximity between Melbourne, Adelaide and Sydney. Our committee believes that with enthusiasts converging from across Australia, considerable friendship between participants will be generated. Start planning your diary now!

Who Will Participate? – All members of the following clubs are eligible to exhibit their cymbidiums.

* The Cymbidium Orchid Society of Victoria Inc.
* The Cymbidium Club of Australia Inc. — (N.S.W.)
* The Cymbidium Club of South Australia Inc.
* The Cymbidium Club of Western Australia

Should you wish to become involved, ensure that you become a member of one of the above clubs, and then register your intention to show. Registration details are included in the Show Schedule.

Incentives For Displays – Given the distance involved for the vast majority of growers, it would not seem practicable for most to bring a large number of plants in flower. With this in mind, a generous prize schedule has been prepared to reward those who go to the considerable effort of bringing their plants along for competition (refer to schedule). In addition to these prizes (including 6 prizes for displays), a total of $2000 has been put aside and will be distributed equally to those who mount their own display. Thus if there 10 displays, each will receive $200. Alternatively with 20 displays, the share will be $100 each.

Social Program – Ararat is the gateway to numerous tourist attractions. Consider having a holiday in the area whilst enjoying the Cymbidium Show. On the Saturday night a three course dinner (including drinks) will be staged, for the reasonable price of $25 per person. An after dinner speaker, together with presentation of major prizes will be the highlight of the evening. An information folder has recently been forwarded to the State Cymbidium Clubs outlining details on accommodation and tourist attractions in the area.

Show Setup – Setup day is Friday 6th September 1996, from 10.00am to 7.00pm inclusive. This will be an event in itself, an opportunity for growers from across Australia to meet and generally have a friendly chat. See you there!

Summary – There is little doubt that our inaugural National Cymbidium Show will be a great success. Our major sponsor, The Rural City of Ararat, is 100% behind this event. As an indication, $2000 has been set aside to publicise the Show to the general public in Victoria. Finally, to all committee members of the Cymbidium Orchid Society of Victoria, well done on the considerable effort and organisation that has been put into setting the standard for our future Shows.

Stop Press!! – A warm welcome to all members of the Cymbidium Club of Western Australia, who at their April 1996 meeting voted to affiliate with the Australian Cymbidium Society. Who will be next Queensland or Tasmania? ■

Graham Guest
President

South Australian Club News

1st Quarter Winner

Congratulations to Joe and Frances Janko owners of *Cym.* Willunga Eyecatcher (*Cym.* Hove x Peter Pan) judged as 1st Quarter Winner (February/March/April) in the 1996 Cymbidium Of The Year. The Cymbidium Club of S.A. selects its Cymbidium Of The Year from 4 Quarterly Winners. This is to encourage development of quality cymbidiums throughout the entire year. The very successful *Cym.* Willunga Eyecatcher cross was hybridised by Deane Mills of Mills Orchid Nursery, Willunga, South Australia.

Collectors Special

Cymbidium Club of South Australia Lapel Badges are now available. A beauty for any collector — decorative, solid gold metal/enamel base sporting a bright red cymbidium, enhanced with white, gold and green segments. Secure Yours Now for just $5.00 and $2.00 P&H — Send $7.00 cheque/money-order to:— Ruth Hoeck, Treasurer, C.C.S.A., P.O. Box 188 Willunga SA 5172 — Phone: (085) 56 2408

Request Dr. Miles Seton's Quest

Ensure memories live on forever! For $20.00 (plus $5.00 P&H) all Australian Orchid Clubs can now enjoy meeting two of Australia's real Cymbidium Enthusiasts at their Meetings. To complement your Members' pleasure of the A.O.R. April '96 p.53-57 feature article "Summer Flowering Cymbidiums" simply book Dean Roesler and Dr. Miles Seton together live on "Video" courtesy of the C.C.S.A. To Hire on a 1st in 1st Booked Basis contact:— Ruth Hoeck, Treasurer, C.C.S.A. P.O. Box 188 Willunga S.A. 5172 — Phone: (085) 56 2408

Annual Spring Show Dinner

During our Annual Spring Show August 26th-31st 1996 the Cymbidium Club of S.A. will host a Gala Dinner for Members, Visitors and guests at 7.00pm Wednesday 28th August in the Burnside Community Centre, 401 Greenhill Road, Tusmore, S.A. For details on Bookings, Enquiries to:— Ruth Hoeck, Treasurer, Phone: (085) 56 2408 or Write:— P.O. Box 188 Willunga, S.A. 5172.

President's Choice

President Ross Woolford asked C.C.S.A. Committee members to endorse John Wood of Hazelwood Park as his C.C.S.A. Publicity Officer nominee. John, 50, joined the Club in 1995 after taking up orchids as a hobby in 1994. Once State Manager for Ciba-Geigy Pharmaceuticals and Media Communications Executive-A.A.P./Reuter, John is a free-lance Journalist/Publicist. Married to Magdalina (with 3 young sons) he is Sales Manager for Ctel-Innovative Internet S.A. and seeks to put the C.C.S.A. on the World-Wide-Web.



Sign Up For The Guest Book

Members are now able to order the latest and arguably best book on Cymbidiums (see Book Review in this issue). Written in an informative and easy to read style by Australian Cymbidium Society President, Graham Guest, together with wife Sue. This brand new book can be obtained directly at C.C.S.A. Meetings. To order your copy, call:— John Wood Phone: (08) 379 6428 (A/hrs) or (08) 364 5028 (bus.) E-mail: sales@ctel.com.au

C.C.S.A. Spring Show '96

The C.C.S.A. will again stage its spectacular Annual Spring Show at Westfield Shoppingtown, West Lakes from Monday 26th to Saturday 31st August 1996. Graham Morris, Orchid Lover and Computer Wizard volunteered his services as Show Marshal. Graham's written application expressing a promise of creative outcomes and calling for Sub-Committee Volunteers was unanimously endorsed at the April 3rd C.C.S.A. Committee Meeting. More exciting details to appear soon.

John Wood
Publicity Officer

HOW TO JOIN A CYMBIDIUM CLUB IN YOUR STATE

CYMBIDIUM CLUB OF AUSTRALIA INC.

Meetings are held on the 1st Thursday of each month (except December, January and February)

Meetings commence 8.00 p.m.

Venue: The Bexley Masonic Hall, Forest Road, Bexley, Sydney, N.S.W.

For further details contact Secretary, Helen Schultz,

1 Cliff Avenue, Peakhurst, N.S.W. 2210 Phone: (02) 5335148

President, Kevin Black, Phone: (02) 5342929

CYMBIDIUM CLUB OF SOUTH AUSTRALIA INC.

Meetings are held on the 4th Wednesday of each month (except December and January)

Auditorium open from 7.00 p.m. — Beginners' Group commences 7.20 p.m.

Main Meeting commences 8.00 p.m.

Venue: The Burnside Community Centre, 401 Greenhill Road, Tusmore, Adelaide, S.A.

For further details contact Secretary, Graham Shevlin,

22 Australian Avenue, Clovelly Park S.A. 5042 Phone: (08) 2767652

President, Ross Woolford, Phone: (08) 2807083

THE CYMBIDIUM CLUB OF WESTERN AUSTRALIA

Meetings are held on the 1st Thursday of each month (except January and February)

Beginners' Group commences 7.30 p.m. — Main Meeting commences 8.00 p.m.

Venue: Red Cliffs Hall, Morrison Road, Red Cliffs, W.A.

For further details contact Secretary, Patricia Hatch, Pager No. 016981087 — President, Ron Ker, (09) 3970661 (after 6.00 p.m.) or Ezi-Gro Orchids, (09) 3432761

THE CYMBIDIUM ORCHID SOCIETY OF VICTORIA INC.

Meetings are held on 2nd Tuesday of each month (except January)

Popular Vote commences 7.50 p.m. — Main Meeting commences 8.00 p.m.

Venue: The Conference Centre, Holmesglen College of TAFE, 585 Waverley Road, Glen Waverley, Melbourne, Victoria.

For further details contact Secretary, Kevin Brown,

4 Riviera Street, Mt Waverley, Victoria 3149 Phone: (03) 98081224

President, Ern Kettle, Phone: (03) 5555646

News From Western Australia

In May 1995 Graham Guest wrote to Kevin Butler suggesting the formation of a Cymbidium Club in Western Australia. Kevin is the proprietor of Ezi Gro Orchids and is an orchid enthusiast, Judge and sought after speaker.

A meeting of prospective members was held in June and the Cymbidium Club of Western Australia was formed. It was agreed that the Club would consider affiliation at a National level after a period of twelve months.

The Club currently has some 73 members who are very keen and capable, as many are already members of other clubs. Meetings are scheduled monthly from March to December each year, and there is a monthly newsletter.

It has been the goal of Club President, Ron Ker, to keep the formal part of meetings to a minimum leaving more time for talks, showing plants and social interchange at the end of meetings.

There have been some very interesting talks to date on a wide range of topics including Building a Shadehouse, Trends in Hybridising, How to make a Crossing, and Plant Nomenclature.

Many quality plants have been benched to date and typical of these is the charming species *Cym. erythrostylum* owned by Pam Cook and photographed by Ivan MacFarlane.

A Club Photographer has not yet been appointed and it is planned that one will be in the near future.

One major Show is scheduled for 1996 with negotiations underway with a major shopping centre.

On 4th April 1996 Club members voted in favour of applying for affiliation with the Australian Cymbidium Society. Members are looking forward to affiliation with the National Body and the benefits this will bring in the future. ■

Tony Budrovich
Editor

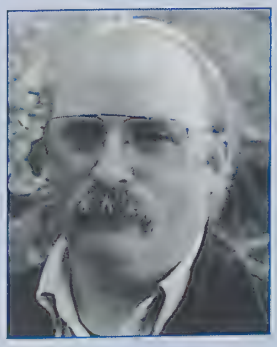


Cym. erythrostylum owner Pam Cook. *Photo: Ivan MacFarlane*

STATE EDITORS

Send all Cymbidium Articles for inclusion in A.O.R. to one of the following:

VICTORIA



DAVID ALLEN
18 Wootten Crescent, Langwarrin,
Victoria, 3910
Phone: (03) 97891501

NEW SOUTH WALES



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To be held from

SATURDAY 7th SEPTEMBER 9 am to 5 pm
SUNDAY 8th SEPTEMBER 10 am to 4 pm

Venue

ARARAT TOWN HALL
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Preliminary Show Schedule is as follows:—

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CHAMPION INTERMEDIATE $200	**PROPINE**
CHAMPION MINIATURE $200	**DURALITE PTY LTD**
CHAMPION SPECIMEN $200	**KIMBERLEY ORCHIDS**
CHAMPION SEEDLING $200	**GLENWOOD ORCHIDS**
CHAMPION NOVELTY $200	**BALLARAT CREDIT UNION**
CHAMPION CUT FLOWER $200	**ARARAT MANAFACTURING ENT. P/L**
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LARGE FLOWERED CYMBIDIUM

Class 1	Predominantly White
Class 2	Predominantly Pink
Class 3	Predominantly Red
Class 4	Predominantly Yellow
Class 5	Predominantly Green
Class 6	Predominantly Brown
Class 7	Pastel
Class 8	Pure Colour Type
Class 9	Blush
Class 10	Any Other Colour
Class 11	Any Combination of Colours
Class 12	Decorative Spike
Class 13	Specimen (minimum 4 spikes)
Class 14	Seedling shown for 1st Time (N)
Class 15	Group of Three for Colour (N)

INTERMEDIATE CYMBIDIUM

Class 16	Predominantly White
Class 17	Predominantly Pink
Class 18	Predominantly Red
Class 19	Predominantly Yellow
Class 20	Predominantly Green
Class 21	Predominantly Brown
Class 22	Pure Colour Type
Class 23	Any Other Colour
Class 24	Any Combination of Colours
Class 25	Decorative Spike
Class 26	Specimen (minimum 5 spikes)
Class 27	Seedling shown for 1st Time
Class 28	Group of Three for Colour (N)

MINIATURE CYMBIDIUM

Class 29	Predominantly White
Class 30	Predominantly Pink
Class 31	Predominantly Red
Class 32	Predominantly Yellow
Class 33	Predominantly Green
Class 34	Predominantly Brown
Class 35	Pure Colour Type
Class 36	Any Other Colour
Class 37	Any Combination of Colours
Class 38	Decorative Spike
Class 39	Specimen (minimum 4 spikes)
Class 40	Seedling shown for 1st Time (N)
Class 41	Group of Three for Colour (N)

OTHER CLASSES

Class 42	Cymbidium Species (N)
Class 43	Novelty Cymbidium
Class 44	Vintage Cymbidium pre-1970 (N)

CUT FLOWER SECTION

Class 45	Predominantly White
Class 46	Predominantly Pink
Class 47	Predominantly Red
Class 48	Predominantly Yellow
Class 49	Predominantly Green
Class 50	Pastel or Blush
Class 51	Any Other Colour
Class 52	Any Combination of Colours
Class 53	Seedling shown for 1st Time

In addition to the above prizemoney, $2000.00 has been set aside for Display Exhibitors — to be divided equally to members whose Displays meet the Show Committee's requirements. This is in addition to any other prizemoney paid.

Note: The Display Spaces will be allotted as registrations and expressions of interest are received (any late entries may not be accepted).

For Registration Forms and other details contact:

Kevin Brown
4 Riviera Street, Mt Waverley, Victoria 3149
Or phone David Allen (03) 97891501



Cym. Beau Guest 'Glenn'



Cym. (Beaconfire x Khyber Pass) 'G'

Andy Easton

by Sue Guest



There would be few people with a serious interest in orchids who have not heard of Andy Easton. The orchid world is fortunate that this man has put his energies into orchid hybridising rather than another profession. Listen to the rich timbre of his voice, and you hear a successful radio personality. Consider his academic achievements, and a position such as Queen's Counsel was obviously not beyond his reach (especially as lawyers are his favourite profession). His contribution to date, both in educative and developmental spheres has been phenomenal and hopefully he will continue to be at the leading edge of cymbidium hybridising.

Andy believes that to be an astute hybridiser you have to "get out of your own backyard". With his numerous overseas trips each year and his networks around the world, he is one of the few people who can truly boast a global view of Cymbidium hybridising.

The Beginning

Born in 1948, in Hastings, New Zealand, Andy cannot remember a time when he did not grow flowers. At age 10 he was growing *Cyclamen* in a small polythene covered greenhouse and selling the plants and flowers to several of the florists in Hastings.

In 1958, whilst preparing for the Hastings Horticultural Society's Autumn Show, he was befriended by Noel Wilson, a retail pharmacist who together with his wife, introduced Andy to the world of orchids. The Wilson's had an excellent collection of orchids and orchid books and it was through them that Andy's enthusiasm was ignited.

It seems fate had it that Andy should develop his interest with a kick start. With Andy's interest in horses (his family raced trotters and had a jockey for a neighbour), it was likely that the 11 year old would slip a bet here or there. During a holiday visit with a great Aunt and Uncle in Wellington, in one day, Andy made a large profit on his betting, enough even at the time to buy a good motor car. The following week he visited a flower show and from seeing some orchids there, made an appointment to visit Herbie Poole's Nursery.

After spending over 1000 pounds on orchid plants he created quite a stir when he arrived home in Hastings on the train with 5 boxes of orchid plants. His Father, who knew orchids were expensive, thought they were stolen and only a phone call to Wellington cleared the air.

Later that year, two dear family friends, May Hopcraft and Elsie Mitchell, who were local florists about to retire offered him his first greenhouse (28 x 15 feet), free for removal. Within a year it was full and a second larger one was built and filled.

As Andy entered his teen years he started buying seedlings from Norm Porter (ex Mansell and Hatcher), Frank Slattery (ex Wondabah), Dorset Orchids (Keith Andrew was Manager) and backbulbs from Dick Hall. At the time *Cym.* Spartan Queen 'Merrilong' cost 30 pounds a backbulb. *Cym.* Ngaire 'Kurangai' 75 pounds and Andy dreamt about *Cym.* Rosanna 'Pinkie' some day.

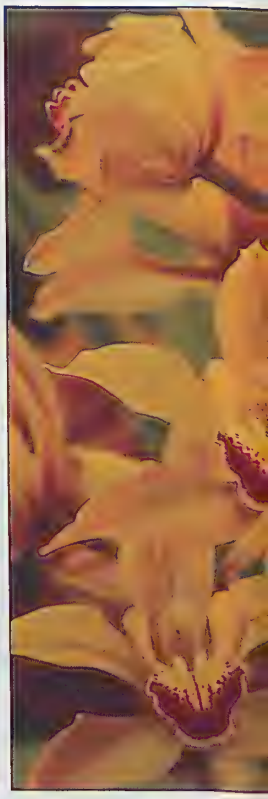
In 1965, after putting in a display at the Hastings Horticultural Societies Spring Show with Noel Wilson and Arthur Dawson, Andy had the foresight to ask people interested in forming an orchid society to leave their names and addresses in a notebook. From this initial list of interested orchid growers the Hawkes Bay Orchid Society was formed in 1970. As Andy recites, *"we needed the chance to get together and share information. At that time we all had lots of enthusiasm, but little experience with orchids"*. I find it amazing to think that a schoolboy would have the initiative and confidence to pursue such an undertaking. It is one thing to participate in something that already exists. It is another to create what doesn't. Andy's vision of what could be, the hallmark of a great leader, has directed his energies throughout his career.

From 1966-1970, Andy's orchid activities were somewhat restricted. During this time he attended the University in Wellington and graduated in 1969 with a Bachelor of Science in Botany. He was awarded a Colorado Flower Growers research scholarship in 1970 and left for Denver in August that year to commence a thesis on diseases in carnations. He completed his Master of Science in Botany and Plant Pathology in 1972. In America he saw his first quality minis like *Cym.* Mimi 'Lucifer' and *Cym.* Jill 'Katalnica'. While at Colorado he was also able to do some orchid virus research with the help of Bob Norton of Dos Pueblos Orchid Company in California who generously sent him a selection of Cattleyas and Cymbidiums with which to work.

Returning to New Zealand with his American wife Carol, Andy found work as a Government Research Scientist. His restless potential inspired something more, and the USA beckoned again. Over 1 million square feet of glass with Roses, Gardenias, Stephanotis and 3 1/2 acres of orchids (Cymbidiums, Cattleyas, Phalaenopsis and Maudiae Paphs) came under Andy's management. He stayed at Chase Gardens in Eugene, Oregon until he decided to start up his own business in Santa Barbara, California utilising the former greenhouses of Featherhill Orchids. These were truly heady times. Andy met Don Wimber who was on the faculty at the University of Oregon. Don Wimber had already converted all of Mrs Emma Menninger's good diploids, and in January 1974 Andy was presented with flowering size plants of these conversions. Orchids like *Cym. parishii* 'Emma Menninger' 4n, *Cym.* Doris Aurea 'Cardinal' 4n, *Cym.* Firewheel 'Ruby' 4n, *Cym.* Rincon 'Clarisse' 4n, *Cym.* Claudona 'Rajah' 4n, plus many others. In February 1974 Andy put *Cym.* Coraki 'Margaret' in to be converted to its tetraploid form. The conversion of these superior diploids to their tetraploid forms literally revolutionised cymbidiums. Andy embarked upon an innovative breeding program, aimed at achieving a quantum leap in the overall standard of cymbidiums. Such was his enthusiasm that he obtained his pilots licence*, and actually flew to orchid meetings throughout western USA. His attendance at the annual Santa Barbara Show was, and remains mandatory even to this day.



Cym. One Tree Hill 'John's Quest'



Cym. Pauwelsii 4n

Yet another move to New Zealand in 1984 where Andy and Carol had been developing Geyserland Orchids, a nursery with geothermal heat since 1982. This time fate dealt some heavy blows to Andy both personally and financially. The year 1987 was, as the Queen would describe *annus horribulis*. Carol lost her courageous battle with cancer. It was indeed tragic that her life had to be cut short, however during their time together they really lived life to its full. Typically Andy Easton, no half measures.

A magnificent tourist project in Rotorua called Fleur International Orchid Gardens had been developed in partnership with several prominent New Zealand business identities — a superb architecturally designed walk through centre was built in the heart of Rotorua, and was quickly acclaimed as a centre of excellence by all who visited it. Unfortunately as with many other promising ventures, the stock market crash of 1987 resulted in a major investor subsequently being forced to abandon their interest in the gardens. Andy also was caught in the garden's financial problems, and relinquished his interests, other than the ongoing financial burdens.

World Orchid Conference

Never one to brood upon misfortune, Andy regained his equilibrium, and desire to move forward. Jane Easton was an important part of this rebuilding and married Andy in 1988. Together they channelled considerable energy into staging the 13th World Orchid Conference, held in 1990 at Auckland. The late Eric Young encouraged Andy's involvement in this event, certainly the pinnacle orchid event

* Andy's pilot instructor was named Peter John — hence the registration *Cym.* Peter Pilot, and Andy's son's name, John.





Cym. Gladys Whitesell x Bill Quinn

ever held in New Zealand. As an indication of their huge time involvement, Andy would often travel to Rotorua — Auckland twice a week in the year preceding the Conference to ensure that organisation of the event was as smooth and successful as possible. Again the recession of the period drastically reduced anticipated sponsorship, whilst serious questions were asked over the actual attendance through the door. These 2 factors drastically reduced the financial viability of the event. All's the pity when one considers that this Show should have been a highlight of his orchid career. Geyserland Orchids were universally admired by visitors throughout the world, with *Cym.* Gladys Whitesell 'The Charmer' being awarded the accolade as Grand Champion of the Show.

Throw your hands up and say *'well that's it'?* Not on your life. Andy restructured Geyserland Orchids in 1991 with the assistance of colleagues such as Floricultura in Holland, Mukoyama in Japan, and Royale Orchids from Australia. Over the past 4 years Geyserland Orchids has gone from strength to strength, and is responsible for supplying:

- the majority of new cymbidiums for Floricultura (outside their own in-house crosses)
- a large number of new plants for Mukoyama Orchids
- most of the hobbyists trade seedlings sold in California through Cal Orchids
- a considerable distribution of new stock through their South African agent, Caro-Lin Orchids

For Australia Andy has established a network of agents across the cymbidium growing states — Ezi-Gro in Western Australia, Atlantis in Victoria, Royale in NSW, and Guest in South Australia. It is of interest that 3 of the 4 agents have decided not to resell many of their Geyserland seedlings, preferring to flower their new stock rather than resell to the hobbyist market prior to flowering. The basis of their decision is that Geyserland stock is very much at the leading edge of development, and basically too valuable to release.

Always at the forefront, Geyserland Orchids in 1995 successfully was awarded patents for *Cym.* Tracey Reddaway 'Geyserland' and *Cym.* One Tree Hill 'John's Quest'. To quote Andy, "because of illegal proliferation we are releasing fewer and fewer meristems: but occasionally we do patent clones for the hobbyist. We eagerly await the opportunity to take our first proliferator to court in Australia or wherever!"

Never one to mince his words. Being so forthright, he often polarises his audience. It's black or white, no shades of grey on issues such as proliferation, the role of



William Easton standing beside *Cym.* Kiwi Magic x Wild Colonial Boy



Cym. Kabuki Dancer 'Geyserland'

orchid clubs, the promotion of cymbidiums, and ethics in the orchid industry. To illustrate, at his last address to The New Zealand Orchid Society, he took the initiative — or in racing parlance, *took the bit between his teeth and bolted*. Told to speak on whatever topic he liked, the opportunity was taken: *What's wrong with orchid clubs in New Zealand*. The reaction was mixed, with many missing the constructive criticism provided. In this respect, this topic would be well worthwhile presented to Cymbidium Clubs in Australia. No-one need be offended, and in the process perhaps the orchid scene can be enhanced with the implementation of some new ideas.

The Future

The Easton's have 4 children, John 16 years, Elsa 14 years (named after Else Sandersen), Rosanna 7 years (named after *Cym.* Rosanna 'Pinkie'), and William 4 years. All have been brought up very well, and in particular encouraged to take on responsibility and think independently. They are pursuing their own interests, with only Rosanna showing what Andy describes as *the faintest interest in orchids*. Perhaps they were vaccinated with anti orchid bug serum.

Jane and Andy have purchased a 12 hectare property south of Rotorua, with plans well advanced to build their new home and nursery on this property. With thermal heating available, and a state of the art Dutch Glasshouse, this site will no doubt be a paradise for the continued development of cymbidiums.

Andy's philosophy of orchid breeding is to assign the greatest emphasis to vigour — not necessarily huge bulbs or foliage, but lots of bulbs and in as short a time as possible. The oldest cymbidiums Geyserland ever flower are 3 1/2 years old (ex-flask), and these are rare. Generally 3 years is the maximum, although he is a little lenient with crosses deflasked in the May-June period. All others are dumped, in addition to the heavy culling that occurs at each potting step. His interest is clearly in the best of the fastest. Andy is of the belief that these times will in the not too distant future be further shortened — to illustrate with *Cym.* Peter Pan or *Cym.* Golden Elf breeding lines 2 1/2 years to bloom is the maximum he allows even at this point in time.

Over the next decade prepare yourself for an avalanche of quite superior albino types, in all categories from super standards to miniatures. Considerable foundation crosses have been put in place using new strains of albino types — *Cym.* Beau Guest 'Glenn' is an example of his early achievement in this field, with this plant producing 2 spikes to the bulb, 17 flowers to the spike.

Another exciting area is working with several Asian orchid interests, with warmth tolerant varieties being targeted for this potentially enormous market.

Talk to those who have known Andy over the past 30 years, and a common thread to emerge is his considerable generosity, integrity, sense of fun and incredible orchid knowledge which he generously shares with others. In particular many a young aspiring cymbidium enthusiast has received encouragement and assistance. Put Andy in a room with a group of interested orchid growers anywhere in the world, and they are attracted to him like a swarm of bees. It is a two way process, for he thrives on stimulating and challenging orchid discussions.

Which naturally leads to some quotes from Andy himself.

On Hybridising

I always like to encourage hybridising and am very negative on the mindless crossings we so often see. If hobby growers have thought out a cross I may often offer comments and suggestions but always to encourage them to have a go. I am less tolerant of people selling seedlings who lack the basic knowledge of fundamental genetic principles.

On the similarities between breeding racehorses and cymbidiums

The similarities between horse and orchid breeding amaze me. Similar proving times, mix of line breeding and outcrossing etc. However a good orchid badly grown is nothing whereas a humble horse well trained can down giants. There is much less argument after a big race than there is after a big orchid show!

On Orchid Judging

I believe orchid judging is deteriorating partly because we are usually expected to be generalists and partly because the judges see far too few orchid seedlings. They often have very little idea of what is average quality versus recognisable improvement. Many judges are pompous poseurs who do little to encourage and foster any development in orchid growing or enthusiasm among exhibitors.

On the Future

I would not want to let this article be published without acknowledging a huge debt to orchid friends around the world who keep me in work by buying seedlings, who share information and plants so generously and who would be friends whether I continue in orchids or not. In this business one always looks to the future and as we approach the 21st century I believe the humble cymbidium is poised to become the pre-eminent orchid through much of the temperate and tropical world. There are exciting times ahead.

Conclusion

I commenced with the story of the youngster who won a small fortune at the horse races. One senses that thoroughbreds, the sport of kings, could well usurp orchids as his true love. Not that long ago he was discouraged from bidding on a yearling thoroughbred out of a half sister to his favourite sire, Icelandic, because it was outside his limited hobby breeder budget. That yearling is now racing as Our Maizcay. At present the Eastons breed 6-8 thoroughbred foals each year, with the long term goal being to breed a Cox Plate or Melbourne Cup winner within 10-15 years. His close friend Kevin Hipkins is currently leasing one of Andy's horses — don't be surprised if you find a 4 legged Geyserland export saluting the judge in a group 1 event in the not too distant future. Andy Easton likes winning. He gets excited if he backs a winner — but equally his blood pumps that little bit faster when he sees a superior seedling.

In writing this article, I was conscious that many important aspects of his life, and many, many anecdotes would be overlooked. Perhaps readers could contact the Editor with their memorable moments with Andy. It would make a great sequel.

Sue Guest
105 Bolivar Road
Burton, South Australia 5110

Get Rid of the Scale

by Glenn Heylen

Although most commercial growers consider scale to be a significant problem I rarely speak to a Cymbidium hobbyist who feels that scale are anything more than an occasional nuisance. In this regard I think that ignorance of the problem is the main reason for the lack of concern. As commercial pot plant producers the appearance of the foliage is an important factor in achieving sales. Not only are retailers sensitive to the appearance of the leaves but they are concerned at the apparent health of their stock, in particular that they are insect free. This is equally important to Cymbidium exhibitors with most orchid clubs having show rules concerning insect infestation of show plants.

Scale are insects which suck sap and can cause serious damage to Cymbidiums. Scale are divided into two main groups known as hard scales and soft scales and various species attack a broad range of Orchid Genera. It is a hard scale species very similar to Citrus Red Scale which attacks Cymbidiums.

These insects exist under the protection of a hard covering. The adult female scale produces dozens of eggs that hatch into crawlers so small that a magnifying glass is needed to detect them. These crawlers live under the adult female scale covering until the climatic conditions are suitable and then move to a new location to settle. At this point they start feeding and produce a round cover by secreting waxy filaments. A period of sustained hot weather, say three days or so of above thirty degrees Celsius, is the best weather for this migration but scale numbers can start to build up as soon as the warmer conditions of spring occur.

As well as the damage that the plant sustains, scale look unsightly on the leaves with the hard covering remaining for months even after the scale insect is dead. In addition, heavy infestations can cause significant discolouration of the foliage which usually persists even after the infestation is controlled.

Control with chemicals is not easy because the hard waxy covering protects the insect. An increasing problem is that resistance to chemicals is developing. The traditional recommendation has been to spray with white oil and malathion although I have seen a broad range of chemicals recommended. Mostly these have been harsh insecticides which are dangerous to both the user and the environment. Occasionally softer options such as the friendlier soap sprays are suggested but this is the exception rather than the rule.

My experience with all sprays has been that good coverage is essential and that repeated applications are required. Even with this approach, which is very difficult to achieve, the problem is likely to persist.

The use of beneficial insects to attack insect pests is known as integrated pest management and is a technique that is becoming more widely used by the horticultural industry. In the citrus industry a tiny parasitic wasp, of the genus aphytis, (and two or three adult wasps are able to fit on a pinhead) is used to control red scale. This same wasp controls scale on cymbidiums. Eggs are laid under the hard covering of the scale by the female wasp and after hatching the larvae feeds on the scale insect. Scale are also a food source for adult wasps. Fig 1: Life cycles of the wasp aphytis and of red scale.

By releasing aphytis wasps two or three times over the Spring/summer months we have been able to significantly improve the scale problem in our nursery and with occasional oil sprays of small areas of severe infestation, we are now confident that the problem is under control. White oil (a mineral oil cut) which has been known to cause severe leaf burn if applied incorrectly and viewed with suspicion by many orchidists, can now be substituted with a horticultural spray derived from Canola Oil. A new product derived from Eucalyptus oil known as eco-oil is to be released soon and is expected to be effective against scales. Both the Canola and Eucalyptus oil sprays claim

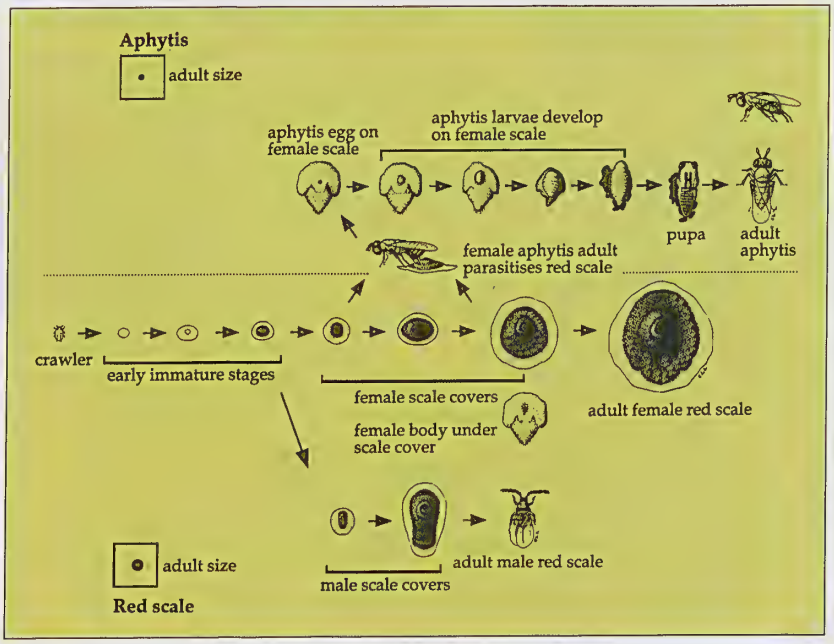


Figure 1. Life cycles of the wasp aphytis and of red scale.

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to have no phytotoxic effects.

May I suggest that every Cymbidium grower take a fresh look at how they approach the problem of scale and take steps to eradicate it from their collection. In very small collections it may be that the practice of judiciously wiping the scale off may be adequate while in larger collections an environmentally acceptable oil spraying program could be undertaken.

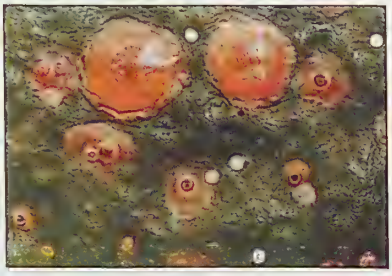
If integrated pest management is to be considered I recommend "The Good Bug Book" as an excellent reference source. It can be obtained from members of the Australasian Biological Control Inc. or the Department of Primary Industries. Qld. It not only provides full information on the Aphytis wasp but other beneficial insects available for scale control along with the full range of beneficial insects for use on a wide range of insect pests.



Aphytis wasp laying eggs in red scale.



Aphytis pupa exposed after scale cover removed. The pupa is formed after the larva has consumed the scale insect. An adult aphytis wasp will emerge from each such pupa.



Red scale on citrus fruit, showing crawlers, white caps, and more advanced stages.

Glenn Heylen
5 Richman Avenue
Prospect, S.A. 5082

A Second Generation *Cym. canaliculatum* Hybrid

by Kevin Western

Each time I see slides of Dr Miles Seton's *Cym. suave* based hybrids it is obvious that some very appealing results have been obtained. Many very desirable clones have been produced and now there are 2nd generation *Cym. suave* hybrids of excellence also. It is gratifying to think that in another one or more generations, through some of these hybrids, *Cym. suave* is likely to produce desirable crosses that will be widely sought after by cymbidium enthusiasts in general.

There are numerous 1st and several 2nd generation *Cym. madidum* hybrids of note. *Cym.* Gladys Whitsell 'The Charmer' has even been a Grand Champion at an International Conference. However, *Cym. madidum* generally has produced large bulbs and foliage in its hybrids, and although I expect some gems are yet to arise from *Cym. madidum* parentage, recently there seems to have been a decline in registrations which have *Cym. madidum* as an ancestor.

As far as I can see, no 2nd generation *Cym. canaliculatum* hybrids have been registered to date. I have made several and flowered one, namely *Cym. Lamorack* 'Sunny Bank' x Babylon 'Castle Hill' and I guess there are likely to be a few others around too.

Cym. Lamorack = *Cym.* Charm 'Elegance' x *canaliculatum* (registered in 1969) and *Cym.* Charm = *Cym.* Ceres x *erythrostylum* (registered in 1930) and *Cym.* Ceres = *Cym. i'ansonii* x insigne (registered in 1919).

Now *Cym. canaliculatum* flowers from late November through to late January in the southern states of Australia. It would be nice to produce handsome hybrids with the same flowering period.

Cym. Lamorack 'Sunny Bank' attracted my attention both as a *Cym. canaliculatum* hybrid and in its own right with its bright red column and its black/red pollen cap. I also have a wish like Dr Miles Seton, to see our Australian native orchids make a worthy contribution to cymbidium cultivars in general.

Cym. Lamorack seemed not to produce true pollen, so I crossed *Cym.* Lamorack with *Cym.* Babylon on the advice from experienced hybridist John Jansma, who stated that *Cym.* Babylon seemed to have the most potent pollen of any stud plant he had used and that if it would not breed with Babylon, then it was unlikely to breed with anything. Damn it all; he was right. Worse than that, only the cross made with *Cym.* Babylon produced a pod!

Only three seedlings germinated. One has since died since deflasking. Only one plant has flowered so far. Unfortunately, even if I wanted to breed with it, this cross is likely to be triploid and so is not likely to be fertile.

The plants have been grown as typical cymbidium seedlings and have tolerated the long, cold, wet Coromandel Valley winters without setback. Plant size is typical of an average intermediate cymbidium, with *Cym. canaliculatum* influence strongly evident in the character of the leaves.

The first spike appeared late March '94 developing very slowly to flower mid-November. Flowers were glossy, dark red with shape something like *Cym.* Volcano. They began to fade about Christmas time, collapsing entirely by mid-January after a long heat wave.

Whilst I am undoubtedly a little biased, I am intrigued by the qualities of this hybrid, especially considering the time of year that it flowered. Even though it is not of showbench quality, I think it gives further indication that with perseverance and more generations of breeding, typically desirable cymbidiums with one or more of our native species in their parentage will one day become more common and sought after by average cymbidium enthusiasts than they are at the moment.



Cym. Lamorack x Babylon

Kevin Western
P.O. Box 276
Blackwood, SA 5051



Cym. Chianti 'Top Shelf'



Cym. Fairy Floss 'Fine Touch'

Cym. Alegria 'St. Lita'

by Kevin Butler

When I decide to use a plant for hybridising I consider its desirable features as well as its bad properties. There is no perfect cymbidium that is why we are still hybridising.

On top of my list of desirable features is productivity. I require an orchid to produce flowers every year. To be able to do this the plant must be a reasonably strong grower. *Cym.* Alegria 'St. Lita' fits the above description well.

Cym. Alegria was registered in 1962. I was made E.W. Menninger of California, U.S.A. and is the cross of *Cym.*. Balkis with *Cym.* Rincon. This hybrid was produced as a triploid using a diploid *Cym.* Rincon 'Clarisse'. The cross was re-made using tetraploid parents. Some of these plants in the cultivar name of 'St. Lita' found their way to Perth from a cut flower producer in New Zealand, fifteen or more years ago. Like all clones some were better than others.

I purchased a piece of what I considered a good clone at least twelve years ago. The plant can produce two spikes off a bulb with ten to twelve large pastel pink blooms in September. The petals and sepals are a little pointed by today's standards. The labellum is large and colourful.

This large colourful labellum is often passed on to its progeny. Flowering time of hybrids can vary and are often influenced totally by its partner. Because the colour of *Cym.* Alegria 'St. Lita' is not strong the hybrids produced cover a broad range of colours. I have seen white through to deep pink/purple. Flower form can be variable, flat flowers to full flowers that have difficulty in opening, have been produced.

One of the first hybrids to flower for me using *Cym.* Alegria was a cross with *Cym.* Chocolada 'Dickie'. This cross was later registered as *Cym.* Hang Loose. The variety 'Full Moon' had exceptional broad segments that prevented the flower from opening. From this cross we also produced some bicolour flowers — 'Loving Memories' is a cream with pink stripping in the petals and a pink blush on the sepals, 'Hot Stuff' is similar in pattern but the contrast is stronger. 'Paul' is another attractive variety being pink with a white edging and white around the labellum. The colour of the labellums vary but all are large and colourful.

Deep pinks and purples were produced when *Cym.* Alegria 'St. Lita' was crossed with *Cym.* Sensation 'Chianti' 4n. This cross was registered as *Cym.* Chianti. I have kept six varieties of this cross. The best of these, I feel, is 'Top of the Class' a



Cym. Barb 'Cherry Supreme'



Cym. Alegria 'St. Lita'

large flat flower with broad segments of dark pink. The labellum is broad and round. Some of the varieties kept are a little full in that they do not open flat. These are 'Doris', 'Top Vintage' and 'Sensation'.

Production from most of the *Cym.* Chianti cross has been good, four spikes from 'Perfection' and three from 'Classy' on their second year of flowering. The major problem of this cross is the shortness of the spikes. This cross flowers for us in September.

Cym. Yvette is a cross of *Cym.* Alegria 'St. Lita' with *Cym.* Beelong 'To Me', which is a medium size red flower. Many pretty cultivars were produced. I kept a few from this cross. *Cym.* Yvette 'Eyes Forward' has a *Cym.* Musita 'Pinkie' type labellum with deep pink and black banding in the labellum. 'My Choice' also has an attractive labellum with lots of deep pink spotting on a lighter pink edge which surrounds the whole labellum. Flower size is medium.

A similar cross using *Cym.* Negrito 'Cherry Ripe' produced the grex *Cym.* Cherry Fire. Two very different cultivars have been kept at this stage. 'Ruth' is a round, deep pink, medium size, with a broad, dark red/black band at the tip of the labellum. 'Pink Angel' is a flat flower that is more pointed on its segments.

When *Cym.* Ruby Eyes 'Red Baron' was crossed with *Cym.* Alegria 'St. Lita' the deflasked plants were strong and grew at a quicker rate than many of my standards, as well, they grew evenly like mericlones. This cross registered as *Cym.* Doris Butler, after my mother, is producing some lovely deep pink/purple intermediates. I have noticed that crosses with *Cym.* Ruby Eyes 'Red Baron' often have flowers with slight colour breaks. Most plants of *Cym.* Doris Butler are flowering without this problem. Production has only been reasonable from this cross. They have been flowering on small plants and should improve when they reach their full potential.

I have been disappointed in the few plants I have seen of *Cym.* Vieux Rose 'Dell Park' with *Cym.* Alegria 'St. Lita'. I had high expectations of *Cym.* Vieux Rose 'Dell Park' as a parent but have been disappointed. Some of the other crosses I have made with *Cym.* Vieux Rose have also been disappointing. Perhaps I have put the wrong orchids with it. Flowers I have seen when using it have very little colour, although its good inflorescence habit is often passed on.

The cross of *Cym.* Barb, which is *Cym.* Alegria x *Cym.* Winter Wonder is producing white and pastel colours. Of the *Cym.* Winter Wonders, 'Icicle' is producing the best formed flowers. Flower size has been

FAMILY TREE FOR *CYM.* ALEGRIA

<<Origin plant>> (s) Seed parent (p) Pollen parent * species

- *Cym. eburneum(s)**
- *Cym.* Eburneo-lowianum(s)
- *Cym. lowianum(p)**
- *Cym.* Alexanderi(s)
- *Cym. insigne(p)**
- *Cym.* Balkis(s)
 - *Cym. eburneum(s)**
 - *Cym.* Eburneo-lowianum(s)
 - *Cym. lowianum(p)**
 - *Cym.* Alexanderi(s)
 - *Cym. insigne(p)**
 - *Cym.* Rosanna(p)
 - *Cym. insigne(s)**
 - *Cym.* Dryad(s)
 - *Cym. parishii(p)**
 - *Cym.* Kittiwake(p)
 - *Cym. eburneum(s)**
 - *Cym.* Gottianum(p)
 - *Cym. insigne(p)**

Cym. Alegria <<<===<<< ORIGINAL PLANT >>>

- *Cym. eburneum(s)**
- *Cym.* Eburneo-lowianum(s)
- *Cym. lowianum(p)**
- *Cym.* Alexanderi(s)
- *Cym. insigne(p)**
- *Cym.* Pearl(s)
- *Cym. grandiflorum(p)**
- *Cym.* Rincon(p)
 - *Cym. erythrostylum(s)**
 - *Cym.* Windsor(p)
 - *Cym. eburneum(s)**
 - *Cym.* Eburneo-lowianum(s)
 - *Cym. lowianum(p)**
 - *Cym.* Alexanderi(s)
 - *Cym. insigne(p)**
 - *Cym.* Louis Sander(p)
 - *Cym. i'ansonii(s)**
 - *Cym.* Ceres(p)
 - *Cym. insigne(p)**



Cym. Hang Loose 'Hot Stuff'



*Cym.*Chianti 'Top Of The Class'

a little disappointing, smaller than both parents, but this may improve on adult plants. Once again flower form varies from round to square type blooms. Labellums are very attractive, being close to black in the variety 'Cherry Supreme', to a pink blush overlaid with spots in 'Blushing Time'. Of others flowered, 'Attractive Eyes' has a large, rounded labellum that makes a lovely contrast, and 'Alex's Choice' turned out to be a large flat flower with a yellow tint coming through.

Cym. Alegria 'St. Lita' x *Cym.* Terama 'Robin' flowered for the first time in 1995. This cross has recently been registered as *Cym.* Warren Michael. Plants flower earlier than the *Cym.* Chianti cross and are not

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Cym. Chianti 'Sensation'



Cym. Cherry Fire 'Pink Angel'



Cym. Yvette 'My Choice'



Cym. Barb 'Attractive Eyes'

as deep in colour. The variety 'Nancy' looks similar to a *Cym.* Sylvan Globe — it won the pink class at a show on its first flowering. Flowers tend to be very full in form.

I have seen a few plants of *Cym.* Alegria x *Cym.* Wallara 'Gold Nugget'. These have been disappointing. I have kept one plant that is quite yellow. Hybridisers don't always get it right.

My best cross with *Cym.* Alegria 'St Lita' has *Cym.* Sylvan Globe 'Pink Delight' as the pod parent. This cross is consistently producing good shaped flowers, from white with a pink blush, through to a mid-pink. Labellums are large and colourful and well displayed with lots of yellow deep in the throat. This cross has been registered as *Cym.* Fairy Floss. The true potential has not been seen, as the plants that have flowered, have not reached their full maturity. Perhaps a future award plant is amongst them!

Cym. Alegria crossed with *Cym.* Olymilum was made by Geyserland Orchids. I registered the cross as *Cym.* Pink Dawn. Productivity of this cross is good and great specimen plants have been produced. Colours range from white with a pink blush through to pink. Shape is reasonable.

Another cross registered as *Cym.* Venus Bay in 1989 was made by Adelaide Orchids. The parents are *Cym.* Nancy Maxwell with *Cym.* Alegria. I have used a cultivar called 'Little Beauty' for breeding, and have seen some good progeny result from it.

There has been only one other registration having *Cym.* Alegria as a parent, *Cym.* Bavarian Lady has *Cym.* Kurun as the pollen parent. I have not seen any of these.

There are many exciting crosses with *Cym.* Alegria 'St. Lita' in the pipeline. Some of these include the following parents, *Cym.* Forest Place 'Queen Jewel', *Cym.* Fancy Free 'Jean', *Cym.* Dutchman's Delight 'Margarieta' and *Cym.* Radiant Harry 'Tranquil Spirit'.

It is exciting to flower a new seedling. I can recommend *Cym.* Alegria 'St. Lita' to produce a high percentage of good ones. Good Luck!

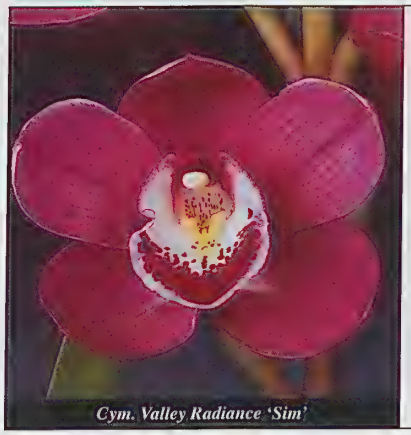
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Cym. (Alegria x Wallara) 'Gold Coated'



Cym. Doris Butler 'Ruby'



Cym. Valley Radiance 'Sim'

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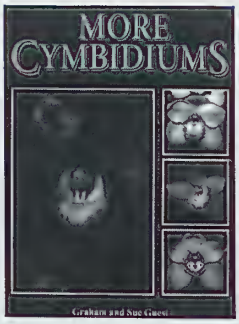
More Cymbidiums
Graham & Sue Guest
96pp colour and B&W
ISBN 0646272977
RRP $25

Along with many other cymbidium enthusiasts it was with eager expectation that I awaited the new publication of "More Cymbidiums" produced by Graham and Sue Guest, as a follow on from their highly successful first book "Cymbidiums — your guide to a rewarding pastime".

This new book builds on our knowledge of the history of cymbidiums and our appreciation of the genus from species to modern hybrids.

Unlike some publications which seem to get bogged down in endless wordage, "More Cymbidiums" is lively and refreshing in language and style, with a balanced apportioning to different chapters.

Quite apart from the history of cymbidiums, the plants and personalities and orchid establishments behind the modern hybrids, we note a distinctive appreciation by the authors of species cymbidiums and "primitive" hybrids. For many these older orchids have a unique charm and character, an exquisite beauty that is often impossible to match with modern hybrids. The



authors reflect a mature approach by their appreciation of both ends of the spectrum.

Chapter 3, "All the rage cymbidiums" discusses in some depth modern hybrids which have held a commanding place as stud plants responsible for the wealth of beautiful flowers we now enjoy. This chapter explores both the strength and weaknesses of stud plants that have held high places in cymbidium nurseries and among enthusiast breeders. Not only are many of these illustrated but each is presented along with its family tree and a selection of their notable offspring. Credit to the authors in that the hybridiser of a notable crossing is given due recognition rather than the registrant of a grex name. So many publications fail in this area.

It was both a delight and a surprise to see included in the book an objective consideration of perfume in cymbidiums. Few publications even touch on the subject. "Fragrant thoughts" could well be expanded on in a future publication as it seems to be developing as an ever more important aspect of marketing a saleable product.

Do you want to get better results from your cymbidium culture? Could you use some helpful tips when showing your cymbidiums? Are you keen to see some of the worlds outstanding new hybrids? This book satisfies in each of these areas — 57 superb colour plates, 22 black and white reproductions, charts and illustrations. A very clear uncluttered layout with easy to follow text and endowed with colour plates of plants flowered in the major centres of the world, namely Australia, New Zealand, United States of America and Japan.

"More Cymbidiums" is a serious and honest look at cymbidiums now, their past and future direction — a real boon to the hobbiest grower, the cymbidium enthusiast and genuine hybridiser alike!!

Copies of the book are available from Graham and Sue Guest, 105 Bolivar Road, Burton, SA 5110.

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DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
New South Wales				
8-9 June	9.30am-4.00pm	Winter	Camden Haven	Catholic Church Hall Ocean Drive, Laurieton
8-9 June	9.00am-4.00pm	Winter	Great Lakes	Forster Primary School Head Street, Forster
8 June 9 June	10.30am-5.00pm 9.00am-4.00pm	Winter (Annual Display)	Sapphire Coast Orchid Club	Narooma Aquatic Swimming Pool Narooma
10-14 June	Shopping Centre Hours	Winter	New South Wales	Roselands Shopping Centre, Roselands
13-15 June	Shopping Centre Hours	Winter	Maitland & Coalfields District	Hunter Mall, High Street Maitland
16-22 June	9.00am-6.00pm	Winter	Eastern Suburbs	Carousel Shopping Centre Bondi Junction
16-22 June	9.30am-5.00pm	Winter	Gosford & District	Market Place Gosford
19-21 June	Shopping Centre Hours	Winter	Illawarra District	Crown Central Wollongong
26-29 June	Shopping Centre Hours	Winter	Cumberland Orchid Circle	Westfield Shoppingtown North Rocks Road North Rocks
27-29 June	Shopping Centre Hours	Winter	Blue Mountains & District	Nepean Square Station Street, Penrith
27-29 June 30 June	9.00am-5.00pm 9.00am-3.30pm	Winter	Sutherland Shire	Catts Nursery 80 Port Hacking Road Sylvania
2 July	7.30pm-10.00pm	Winter	Panania & East Hills (R.S.L.)	Panania East Hills RSL Club Panania
3 July	7.30pm-	Winter	Eastwood & District Orchid Circle	Uniting Church Hall Acacia Street Eastwood
4-6 July	Shopping Centre Hours	Winter	Campbelltown & District	Minto Mall Shopping Centre Minto
11-13 July	9.00am-7.00pm	Winter	Coffs Harbour	Toormina Shopping Centre
15-20 July	9.00am-5.00pm	Winter	Fairfield District	Bass Hill Plaza Hume Highway Bass Hill
16-19 July 20 July	8.30am-9.00pm 8.30am-2.00pm	Winter	South Coast	Corrimal Court Shopping Centre Princes Highway Corrimal
19 July	12 noon-5.00pm	Winter	Shoalhaven	Presbyterian Church Hall Kinghorne Street Nowra
22-27 July	Shopping Centre Hours	Winter	Berowra & District	St. Ives Shopping Centre Mona Vale Road St. Ives
23-28 July	Shopping Centre Hours	Winter	Central Coast/ Hunter Region Cymbidium	Lake Haven Shopping Centre Lake Haven Drive Lake Haven
24-27 July	Shopping Centre Hours	Winter	Parramatta & District	The Hills Shopping Centre Cnr. Prospect Highway & Federal Road Seven Hills
25-27 July	Shopping Centre Hours	Early Spring	Maitland & Coalfields District	Cessnock Market Place Cessnock
25-28 July	Shopping Centre Hours	Winter	Western Suburbs	Campsie Centre 14-28 Amy Street Campsie
1-4 August	9.00am-5.00pm	Winter Orchid Spectacular	Gosford & District	Gosford Showground Dwyer Pavillion Showground Road Gosford
3 August	9.00am-2.00pm	Winter	Southern Riviera	Anglican Church Hall Princes Highway, Milton
16 August 17 August 18 August	10.30am-5.00pm 9.00am-5.00pm 9.00am-4.00pm	Winter	Sapphire Coast Orchid Club	Twyford Hall Princes Highway Merimbula

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
17 August	10.00am-4.30pm	Winter	Bellinger Valley	Anglican Church Hall Oak Street, Bellingen
17-18 August	8.00am-5.00pm	Winter	North Shore	Memorial Hall Starkey Street, Forestville
28-31 August	Shopping Centre Hours	Winter	Ku-Ring-Gai	Westfield Shoppingtown Hornsby
28-31 August	Shopping Centre Hours	Winter	Cumberland Orchid Circle	Westfield Shoppingtown North Rocks
Queensland				
20-22 June	Shopping Centre Hours	Winter	Pine Rivers	Aspley Pick n' Pay Hypermarket Aspley
22-23 June	9.00am-5.00pm	Winter	Townsville	Townsville Orchid Society Hall Pioneer Park, Ross River Road Thuringowa Central
8 July 9 July	9.00am-10.00pm 9.00am-4.00pm	Winter	Atherton Tableland	Atherton Show Showgrounds Atherton
12-13 July 14 July	9.00am-5.00pm 9.00am-2.00pm	Winter	Caboolture	Shire Memorial Hall King Street Caboolture
25-27 July	Shopping Centre Hours	Qinter	Toowoomba	Clifford Gardens Shopping Centre
26-29 July	Shopping Centre Hours to 12 noon Saturday	Winter	Bundaberg	Hinkler Place Bundaberg
27 July 28 July	9.00am-5.00pm 9.00am-4.00pm	Winter	John Oxley District	Mt Cool-tha Botanical Gardens Auditorium Mt. Cool-tha
8-10 August	Shopping Centre Hours	Winter	Darling Downs Orchid Association	K Mart Shopping Centre Ruthven Street Toowoomba
21-24 August	9.00am-6.00pm	Spring	Maroochydore	Kawana Shopping World Nicklin Way Kawana
24 August 25 August	9.00am-5.00pm 9.00am-3.00pm	Winter	Logan & District	Senior Citizen's Hall Jacaranda Avenue Woodridge
29-31 August	Shopping Centre Hours	Spring	Pine Rivers	Deception Bay Market Place Deception Bay
29-31 August	TBA	Spring (Strawberry Festival)	Redlands	Cleveland Showgrounds Cleveland
29-31 August	Shopping Centre Hours	Spring (Gold Coast Show)	The Gold Coast	Jupiters Pavilion Parklands Complex Cnr. Parklands Drive and Smith Street Southport
30-31 August 1 September	9.00am-9.00pm 9.00am-5.00pm	Spring	Townsville	Townsville City Council Administration Building Walker Street, Townsville
Victoria				
8-10 June	9.00am-5.00pm	Winter	Melbourne Eastern	Waverley Campus Holmesglen College of TAFE 585 Waverley Road Glen Waverley
13-14 June	9.00am-5.00pm	Winter	Maribyrnong	Maribyrnong Community Centre Randall Street Maribyrnong
20-21 July	9.30am-4.30pm	Winter	Sunraysia Orchid Club	Greek Orthodox Hall 312 Deakin Avenue Mildura
22-27 July	Shopping Centre Hours	Winter	Ringwood	Eastland Shopping Centre Maroondah Highway Ringwood
28-29 July	10.00am-5.00pm	Winter	Warringal	Austine Repatriation Medical Centre Repatriation Campus, Red Cross Centre Bell Street Heidelberg

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
2 August	8.00pm- (members only)	Winter	Stawell	Masonic Hall Skene Street Stawell
6-11 August	Shopping Centre Hours	Winter (Cranbourne Show)	Mornington Peninsula	Cranbourne Park Shopping Centre High Street Cranbourne
10 August 11 August	12 noon-5.00pm 10.00am-2.00pm	Winter (Inter-Club Comp.)	Horsham & District	Town Hall Supper Room Wilson Street Horsham
10 August 11 August	10.00am-4.30pm 9.30am-4.00pm	Winter	West Gippsland Orchid Club	St. Kieran's Hall Lloyd Street Moe
South Australia				
22-23 June	9.00am-4.00pm	Winter	Port Lincoln Orchid Club	Kallinyalla Nursery
12 July 13 July	12 noon-6.00pm 9.00am-4.00pm	Winter	Murray Bridge & District Orchid Club	John Donler Hall (Adjacent Lutheran Church) Swanport Road Murray Bridge
21-27 July	Shopping Centre Hours	Winter	Whyalla Orchid Club	Westland Shopping Centre Nicolson Avenue Whyalla
27-28 July	9.00am-	Winter	Port Augusta Orchid Club	Mitre 10, Garden Section Woodcock Street Port Augusta
29-31 July 1-3 August	9.00am-5.00pm	Winter	The South Australian Orchidaceous	Castle Plaza Shopping Centre 992 South Road Edwardstown
26-31 August	Shopping Centre Hours	Spring	Cymbidium Club of SA	Westfield Shoppingtown West Lakes
Western Australia				
10-13 July	Shopping Centre Hours	Winter (Orchids in July Show)	Western Australia	Park Centre Shopping Centre 789 Albany Highway East Victoria Park
20 July 21 July	12 noon-4.30pm 9.00am-4.00pm	Winter	Manduray & District Orchid Club of WA	Barragup-West Murray Community Hall
24-28 July	Shopping Centre Hours to 3.00pm Saturday	Winter	Wanneroo	Lakeside Joondalup Shopping Centre Joondalup
25-27 July	8.30am-5.30pm	Winter	Bunbury	Bunbury Forum Shopping Centre Sandridge Road Bunbury
25-26 July 27 July	8.30am-5.30pm 8.30am-9.00pm	Winter (Display)	Peel Region of WA	Mandurah Forum Shopping Centre Mandurah City
8 August 9 August	8.30am-9.00pm 8.30am-5.30pm	Winter (Display)	Peel Region of WA	Halls Head Shopping Centre Halls Head via Mandurah
Northern Territory				
25-27 July	Show Times	Winter	Nightcliff	Royal Darwin Show Tate Place Winnellie
New Zealand				
19-21 July	10.00am-5.00pm	Winter	New Zealand	Mt. Albert War Memorial Hall, New North Road Mt. Albert Auckland
20 July	9.00am-4.30pm	Winter	Hawke's Bay	Taradale Town Hall Cnr. Meeanee & Lee Roads Taradale, Napier
South Africa				
26-30 June	9.00am-9.00pm	Autumn	Northern Transvaal	Sunny Park Centre Pretoria
6-8 September	9.00am-5.00pm	Spring	Cape Orchid	Exhibition Hall Kirstenbosch Botanic Gardens Newland, Cape
28 August-1 September	9.00am-9.00pm	Spring	Northern Transvaal	Sunny Park Centre Pretoria

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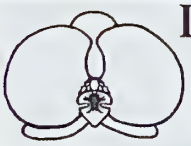
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NORTHERN TERRITORY: Honorary Secretary, P.O. Box 38493, Winnellie 5789.
Phone: (089) 32 1977.

Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
14 McGill Street, Lewisham, NSW 2049
Australia.
Phone: (02) 560 6166. Fax: (02) 560 6677

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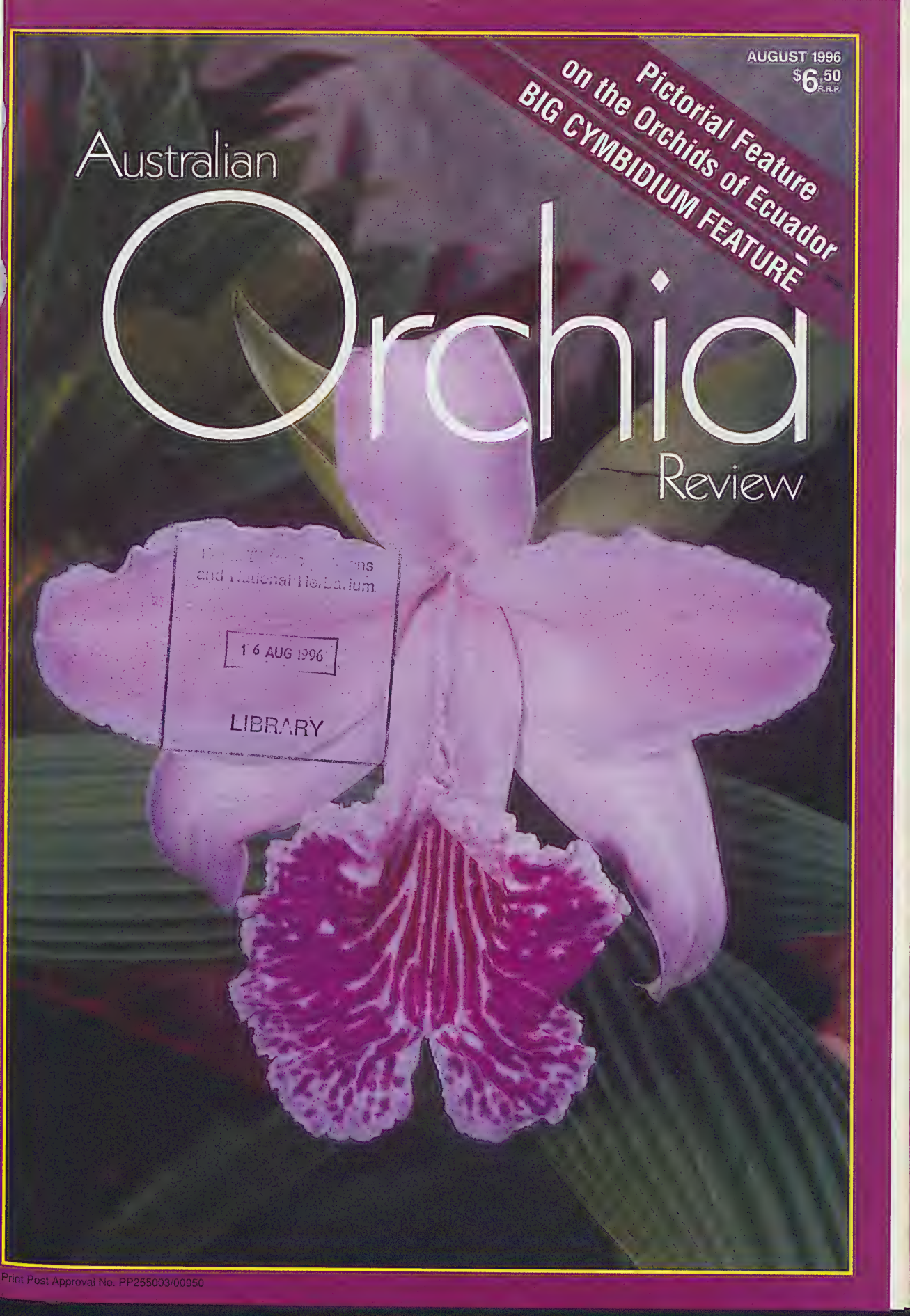
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This orchid is typical of the rare and fascinating orchids recently found by Ray Thomson on his exciting and very rewarding journey to Southern Ecuador. – *Photo: Ray Thomson.*

The AOR is privileged to publish this two part feature "The Magic of Zenen – Orchid Observation in Ecuador." The first instalment commences on page 4.

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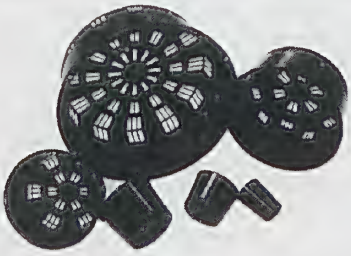
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14 McGill Street,
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All other correspondence to:
AOR Publisher, Graphic World,
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What's great about Machala? Well, nothing much. It's hot and sticky, dusty and grimy, a little on the dirty side, right on the Equator and it can be dangerous, both to your life and limb and to be sure, your health. Unboiled water, even ice in your drinks can quickly get you a nice dose of the local upset tummy or Montezuma's Revenge as it is known to travellers in these parts. As well, I advise you not to go off on your own looking like a tourist with a few dollars in your pocket and the latest S.L.R. slung over your shoulder . . . you can easily lose both. However, there is nothing new in all this, New York, London and parts of Sydney are similar!

Machala and the port of Puerto Bolivar is Ecuador's most important port. It is from here that their greatest export, bananas leave for all the markets of the world. Puerto Bolivar is also the place where you can, right on the waterfront, enjoy the greatest meal of fresh shrimp available anywhere. The services are quite wonderful. I have never been ill from a meal there, I think "Pepes" restaurant, right at the waters edge is best. It appears there is something in Machala after all!

Machala has been important for me, as it is the city from where you access the orchid-rich areas of the southern Ecuadorian province of Del Oro and specifically the area known as Piñas. I like Piñas. First of all the climate, as you rise to around 1100 metres is noticeably fresher and more comfortable than the coast. It appears cleaner here as well and with the reduction in temperature and humidity away from the coast, it appears that folks become more tolerant of each other and as a consequence, the rate of violence and robbery decreases.

Access by bus, if you don't have a car, is relatively easy, but, you will go through a military control post which will check your passport and tourist visa issued at the airport, DON'T lose that little piece of paper or you may be indefinitely detained. I've had this frightening experience; it becomes even more frightening when you see the hardware these guys carry! These days I staple the visa into my passport. This part of Ecuador is close to the sensitive Peruvian border area and the military are noticeably nervous. Such control points will be encountered all over the country and particularly in the South.

As you climb from sea level and near Piñas, the first thing you are going to notice from the bus window as you literally speed along, will be the oncidiums with their long panicles of rich yellow and brown flowers waving in a gentle breeze. A most beautiful species of *Sobralia* grows as a terrestrial companion plant to the epiphytic Oncidiums but, the Sobralias will be in brighter more exposed positions. These *Laelia/Cattleya*-like blooms may be observed in pristine brilliant whites with yellow perianth tubes. I also observed rarer and striking delicate pinks. The white species just has to be *Sob. powellii*, the other *Sob. pulcherrima*. They crowd together, the powelliis, thousands of them, at times completely covering steep road cuts.

Closer examination of these road cuts will reveal all the other usual stuff like Pleurothallids of many different genera and species. The *Zootrophion* of Piñas is extremely large and the more diminutive *Masdevallia nidifica* can be found as a yellow through to red. *Pleurothallis grobyi, Masdevallia erinacea* and *Psygmorchis pusilla* grow here as well. Look out also for the brilliant red flowers of the local native *Begonia* which may be a companion to the beautiful *Eleanthus* species I believe to be *Ele. purpureus*.

Bromeliads and ferns are of course more than well represented and an interesting species of *Gesneriad* grows here like a vine.

I have travelled to Piñas on several occasions attempting to locate *Dracula cordobae*. On the first expedition I believe I found it, but without flowers you can never be sure of what you have. On the second trek my arrival coincided with the flowering season, (February/March by the way), and I was delighted, even excited, to find many examples of this fine *Dracula* in flower.

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Orchid Observ...

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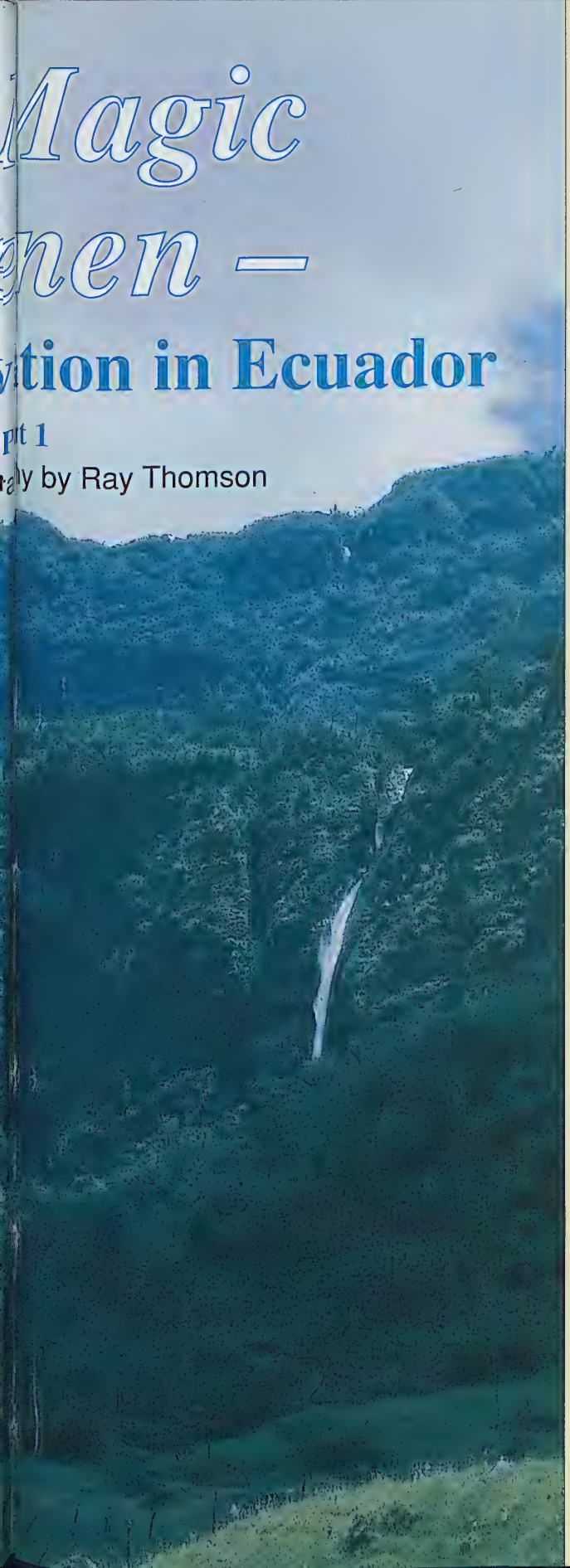


The water fall at Giron "El Chorro". Just an hour out of Cuenca, Giron is the habitat for the distinctive *Oncidium nubigenum* variety *alticola*. It grows close to the base of "El Chorro".

Magic
nen –
tion in Ecuador

pt 1

y by Ray Thomson



I have seen Draculas growing in the habitat before, but in a much wetter and cooler area with not an exposed root to be seen, all being covered by moss and detritus. However, *Dracula cordobae*, displayed at its best was found growing on thinnish horizontal branches with most of the root system visible. The humidity was high and the temperatures moderate, the leaves were extremely clean and I put this down to the fact that at this location, far away from the pollution of civilisation, the rain and air are quite pure by today's standards.

At 1100 metres the atmosphere was comfortable for me, as obviously it was for the Draculas, so this species would then transpose to a cool glasshouse environment over much of cool temperate Australia. In fact I have been cultivating this species, from flask/seedling grown plants in plastic mesh baskets for many years. Growth for me in an unheated plastic igloo in southern Victoria has been vigorous and flowering good, however you will never grow them into the spectacular specimens as they occur in their natural habitat.

It was at this location that I also observed a most unusual *Pleurothallis* with two distinctly different leaf forms, the leaves supporting the centrally appearing blooms being noticeably different in form from those that never flower. I will attempt to identify the species and would call it *Pleurothallis cardiostola*. These *Pleurothallis* are however, just so numerous that I may be wrong!

The Oncidiums, as they were seen from the roadside were just as numerous deep inside the brighter parts of the forest and I would have to call it the very wide spread *Oncidium obryzatum*. Of course there are *Stelis* and *Lepanthes* galore including the rare *Lepanthes dodsoni*, but they do not seem to generate as much excitement here as the larger flowered genera and be sure, amongst the local people, there is interest and even orchid appreciation groups, so don't go wandering off into the bush to remove plants; you just may be stealing a local landowner's favourite orchid being prepared for a local show and I can assure you, your reception if caught, may be less, far less, than pleasant. In one such land owner's collection I also spotted many clones of a *Huntleya*, I was informed it grew locally and I would call it *Huntleya wallisii*, the *Bollea* was definitely *Bollea ecuadoriana*.

While you are in this area go on to Zaruma to experience one of the prettiest and cleanest little Ecuadorian towns I have ever had the experience of visiting. Zaruma, I was informed by proud locals, is 100% Catholic and a steep hilltop town with spectacular Andean views and sunsets, clean air and friendly people. At night it is quiet, safe, and clean hotels for the weary orchid explorer are available at little cost. Visit the lovingly cared for old church, which along with the town square are both musts for a visit. This town square is absolutely charming with shrubs thoughtfully trained to grow over the park seating for protection from the intense midday sun. Sit there awhile and watch life go on around you, for example, freshly slaughtered meat being sold off the back of a truck and fish from a box on the back of a motor bike.

Here also you can taste the local delicacy "Manjar de Leche", which is full cream cows' milk and brown sugar, vigorously boiled, then cooled, to create a rich caramel.

You can arrive at Machala via Guayaquil on the coast of Ecuador, or, a pleasant three to four hour 5 dollar bus ride will get you there from Cuenca through some spectacular high altitude Paramo desert and this *Bromeliad* and *Tillandsia* rich territory is the equal of any to be found anywhere on the South American continent. Don't forget also, local buses in Ecuador will set you down anywhere you choose and these buses may also be hailed at any point along the road as well.

The drivers appear not to like being passed by a bus from an opposition line, so two buses screaming down the sometimes narrow roads and side by side, neither one wanting to yield to the other until a truck suddenly appears over the next hill, is not

uncommon. Sitting up front, then, can be a frightening experience and I try to avoid this position, preferring the psychologically safer rear.

If you travel by bus, pay the extra dollar or so for an executive coach with air conditioning and toilet facilities on board. These coaches do not accept the chickens, pigs and other noisy and smelly cargo, maybe guinea pigs, that the cheaper lines do.

In all the forests of the Piñas areas, I noticed that the light levels appeared moderate to dull. Many would be amazed perhaps that sufficient light was available for good growth and flowering, however, these levels are quite constant throughout the year, unlike the levels in regions far from the tropics which fluctuate and vary greatly with the seasons as we in Australia and the USA know them. Take along a light meter and make your own measurements. You'll be surprised at how much radiation actually gets through.

Like most of Ecuador, Piñas through to Zaruma is just the greatest for orchids. You can waste some time though if you don't know where to look. If you are serious about seeing orchids, bromeliads and ferns too, growing naturally in one of the last but unfortunately rapidly disappearing orchid outposts on Earth, it is worth searching out a knowledgeable guide with four wheel drive, to assist with your quest.

It seems, though, you will always end up back in Cuenca as this is a charming city central and important for your explorations of the south.

One morning I was to go to Burgay, in search of the beautiful Oncidium bearing that locality varietal name. This habitat is on the road north from Cuenca to Quito. It is an important arterial road, so if you want to protest about something, blocking such an important highway, (this is the Pan Americana after all), is the way to do it and bring attention to your grudges.

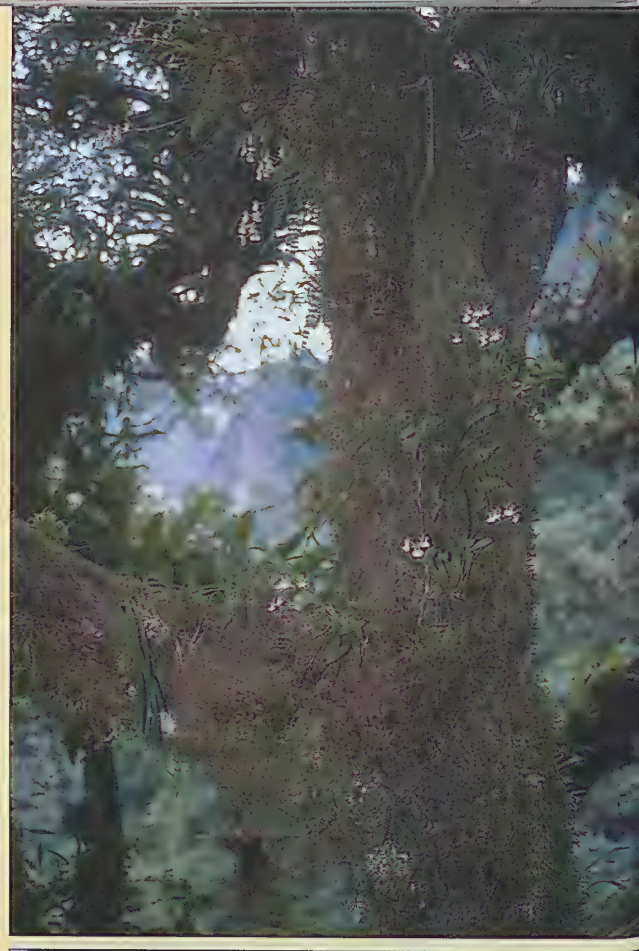
Racism is alive and well in most parts of South America and the indigines, that is the Indians and original inhabitants of this continent, feel they are getting and usually do get a raw deal.

Even after more than 500 years of Spanish colonial domination, nothing much has changed for the average Indian, yet this country, Ecuador, is one of the richest in this hemisphere. Gold, silver, oil and the agricultural bounty of both the coast and the Andes, provide a life of luxury for maybe 5% of the still dominant European aristocracy.

I believe that to protest is a right, however, it can certainly interrupt ones orchid explorations, as indeed it did that morning. Boulders, big ones too, as well as rocks, felled trees and the usual heap of burning tyres blocked our path. To try and run the gauntlet, may prove not to be the most sensible thing to do as physical violence can quickly erupt and anyway, I noticed even a heavy truck or bus could not negotiate the sizeable as well as burning objects placed in their paths. Beware as well the extra large boulders which can come tumbling down upon you from above. All this, the unmistakable sign of the frustration that these people, many of whom I know and sympathise with, are suffering. You may never understand all this, but in time you may accept it as being quite normal.

What to do with this day then? Well, there is a different and equally as beautiful variety of *Oncidium nubigenum* just an hours drive to the south of Cuenca. Maybe to salvage a day that was rapidly disappearing, this would be the place to head for. Out of Cuenca you take the right hand bend and the Machala road heading for Giron.

A small area known as Nero is up high in the mountains just out of Cuenca and not too far out of the way. There are remnants





Top: If you know where to look, a few minutes off the muddy dirt track takes you well into orchid territory, here *Onc. nubigenum* var *alticola* grows but, only where it is out of the reach of greedy collectors! **Right:** *Onc. nubigenum* var *alticola* is identified by the caramel coloured sepals and petals which contrast rather strikingly, with the large pure white labellum and the whole thing set off by the light mauve spots at the column base.



of original forest there and at 3,000 metres, it is much cooler than Cuenca's 2,520 metres. Possibly worth a look.

Nero is a catchment area for the city's water supply and as such, you would expect to find a pristine forest full of native trees, bird and animal life and of course, orchids. Years before, I am told, this was so.

Driving along the access road I noticed good colonies of the brighter light loving Pleurothallids including a brilliant brightly coloured but straggly growing orange Pleurothallis species. A good harbinger, I thought, for another exciting orchid expedition.

Moving from the brighter light of the road into the forest, a nice stand of an orange to yellow Elleanthus growing by a swiftly running stream gently swayed in the breeze waving us along.

It was moderately dark and damp and as we moved along unmistakable cattle tracks, we became aware of the damage these animals do to the soil structure. Not only are the soils churned into a thick gooey black paste, but roots are exposed and I assume if palatable to these animals, consumed. I saw no ferns, gesneriads or fuchias which would be normal in such an environment.

Where were the Mosses and Lichens? Lichens in particular are extremely sensitive to air borne pollutants. A decrease or disappearance of Lichen populations where previously they flourished, is an indication of increased pollution and poor air

Left: More interest is being taken in *Eleanthus* and at Nero this unusual form took my eye as the reds through to purple are more the norm. **Below left:** As you rise up from Machala and sea level, the first orchids to be seen are invariably Sobralias. Unnoticeable until they flower, when in bloom they are so spectacular. Here, *Sobrallia powellii* announces you have just entered orchid territory. **Below right:** Road cuts along the way close to Piñas are always worth closer examination as was demonstrated by this unidentified *Stelis* species. This genus appears to prefer places with more light, but still cool and humid.











quality. Orchids, like other life forms are naturally sensitive as well.

We moved further into the forest, such as it was, and I noticed a solitary *Oncidium* growing way above animal reach. During the hour or so I spent in this forest, it was sadly the only orchid apart from the aforementioned *Elleanthus* and *Pleurothallis*.

It was a strange, quiet and lifeless place, this Nero. I saw neither bird nor insect and I know that without these co-habiting life forms, which are the pollinators, any original orchids have ultimately faded away.

Normally one is thrilled with the busy buzz, flashes of iridescent greens and blues as well as the song of that most fascinating of aerial acrobats, the humming birds.

Ones attention is also often taken by the brilliant colourful flashes of the myriad butterfly and bee species, as they go about their nectar and pollen gathering activities, but here, at Nero, nothing. Not even a fly did I see.

Later, upon discussing this depressing place, we conjectured that the grazing cattle who have free range in such places in Ecuador, even water catchments, had so disturbed the soils that insects, which spend part of their life cycle in these soils, had become extinct. With their disappearance, orchids relying on them as pollinating agents had also died out and other agents such as birds, who relied partly on those insects as well as the nectar reward from many orchid species as a food source, had also ultimately perished or moved away from the area. A combination of poor air quality and habitat disturbance has obviously had much to do with the biological decline of this area.

In many such places, the balance is a delicate one and for Nero, the scales will never balance again!

I was glad to be away from this location and on the way to Giron.

Giron is just another of those many villages that a traveller



Top left: Also preferring a more open position, *Psygmorchis pusilla*, previously *Onc. pusilla*, grows as a twig epiphyte and may be difficult of artificial culture. Why not leave them there and just enjoy them in the habitat? **Top right:** This magnificent example of *Huntleya wallisii* I found growing in a local farmers garden and he informed me it grew on his property. Many of these country folk have a love of nature and often will permit you to explore but, be warned, just look, don't touch! **Top right centre:** In the same area of Piñas, but requiring a days trek, *Bollea ecuadoriana* is always a sight to behold when in full bloom. Many are much paler than illustrated and this one would be one of the best. **Right:** Yes, of course there are Masdevallias including this unusual colour variation of *Masd. nidifica.* Normally they are red through to greeny yellows. This appears to be an intermediate form found only in the Piñas area.





passes through on the road to wherever. Just a few minutes along the unmade road to the right off the highway and you become aware that you are entering another area with distinct orchid possibilities. The path is blocked as local workers prepare to dynamite a huge rock dislodged from above during the last torrential downpour which was possibly the night before. You need to lock your jeep in 4x4 if you are to get through in many places. We squeeze through and later hear the explosion well behind; I prefer to be far from this type of activity.

In the distance the massive verdant presence of the Andes towers above the emerald green countryside. Flashes of brilliant white just below the mountain top, forms a thin ribbon of light running down the face of the mountain, this identified as a waterfall. This cascade was divided into two distinct very steep drops and from a distance the magnificence of this 300 metre fall could not be appreciated. At 2250 metres altitude and with such a high humidity in an area hopefully devoid of grazing cattle, there will be orchids ahead! It's a popular spot this waterfall of Giron; this is made obvious as we survey, amongst the native grasses and shrubbery, the discarded assorted rubbish including the ever present Coke and Fanta bottles. "Take Away" plastic food containers from weekend picnics also litter the landscape. What a way to treat a paradise!



The path was well worn and steep; a foothold could be made all the easier by the exposed tree roots, which unlike branches, can be trusted to take your weight.

Just 50 metres or so up the path I was amazed to be confronted by an old oak tree literally loaded up with Oncidiums, and so soon into the expedition. What was striking however, was the fact that none of the plants were accessible, that is, all those plants within reach were gone.

Yes, this was a popular place for sure, especially with orchid collectors.

Those plants that remained though were something to behold and they were different. I know of many varieties of *Oncidium*

Top left: Also now commanding much attention from the lovers of miniatures, *Lepanthes* are indeed charming little orchids which grow well in captivity if their the cool but humid conditions are provided. *Lepanthes dodsoni* is rare and unusual with its greenish colouring set off by the darker veined leaves. **Top right:** It is always an accomplishment to set out to find something and succeed. *Dracula cordobae* was the reason for this visit to Piñas and we were not disappointed. The leaves were unmarked and the plants were all growing well. Here we were far enough away from the pollution of the cities to assume that both clean air and rain were the reason for such clean foliage. *Dracula* are always good indicators of water quality especially, their leaves exhibiting tip die back and spotting if all is not well.

nubigenum, many or most of them being the most wonderful creations, but, the colour and size of *Onc. nubigenum* var. *alticola*, really is special and along with the variety we have named Zenen, *alticola* is one of my favourites.

In places such as this you tend not to notice the Pleurothallids, they are just too numerous. The minuscule *Platystele oxyglossa* was a rival to the Oncidiums even though Liliputian in size and I did see a few nice *Stelis* as well. I am told *Cyrt/Onc. macranthum* once grew here as well, but sadly, greedy collectors seem to have practically caused its extinction in this area although I did see two nice flowering specimens mounted on trees in a farm house garden. Maybe they were the last?

Back in the forest, iridescent green and red colibris, humming birds, darted from place to place searching for a diminishing food source and colourful butterflies were also evident on similar missions of food gathering and pollination. Few realise the importance of these other life forms in the continuing existence of orchids. The star of this place must however be the waterfall, "cascada" as these massive sheets of crystal clear water are called in Spanish.

I believe it was the noise that most impressed me. Ear shattering it was, the incredible volume of water falling from such a great height made impact upon the ancient rocks below. Attempting photography was a daunting task as a split second only was available before those impressive and expensive optics became saturated. Within a minute I was myself soaked through to the skin by the thick and forceful mist. This was "el Chorro", translated, "the Jet" and the roar was similar.

What beautiful water it was too. Filling bottles for experiments gave us containers of optically pure liquid with a measured P.H. of 7.3. Impurities were visually insignificant and the water trace element rich.

No wonder orchids grow here. Even the intrusion of man into this primordial forest environment cannot completely suppress their success and reproduction. Such are the conditions which are optimum for pollination, seed setting, germination and finally, rapid seedling growth.

What a shame, though, to see those paths littered with lolly papers and other refuse deposited by uncaring visitors. What a pity also to note that the only orchids visible, were those that could not be reached.

That night, after returning to Cuenca, I thought a lot about the waterfall at Giron, while I was there, I had a strange feeling of deja vue, you know, like being transported back in time a million years to a place I was familiar with and I guess to a degree I was. What I was looking at in those remaining inaccessible parts of this place was, I believe, indeed unchanged for that number of years. Fortunately because of the steepness of the rocky faces of this mountain, in another million years, it may still all be there.

I guess I need to thank the organisers of those demonstrations on the road to Burgay that morning, for the experience of Giron. Burgay can wait and in time I will go there, but the Waterfall at Giron, "el Chorro," will be hard to beat.

● Part 2 will feature in the October 1996 "AOR".

Ray Thomson
Mooroolbark Orchids & Micro Propagation Centre
6 Bellara Drive
Mooroolbark, Vic. 3138
Australia

Below left: Formerly *Cryptophoranthus*, the genus is now known as *Zootrophion* and they are very unusual Pleurothallids. *Zootrophion endresiana*, was growing close to where we were to find The *Dracula* we had come to look for. **Below right:** I can't resist these even with leaves that have been dined upon by some insect or animal. Its a *Pleurothallis* of course growing in the forest at Piñas along with the Draculas. The mosses and lichens growing on the leaves also indicate that this ecosystem is in good shape.







This was the accommodation at the Krawil lease. From the Queensland Government Mining Journal. *By courtesy of Colin Hooper.*

John Henry (Jack) Wilkie

by Len Lawler

Jack Wilkie was born on 12th March 1902 at Golden Gate on the Croydon Goldfield where his father worked the Richmond mine. Golden Gate is now deserted but the nearby Wilkie's Hill serves as a memorial to this mining family. At the age of twelve, Jack was sent east. He went by Cobb and Co. to Almaden, then by train to Cairns where he had his first sight of the sea, and on to Townsville, where a year at West End school completed his formal education.

He then returned to Babinda where he worked as a railway porter and telegram-boy. After a stint as customs clerk in Brisbane and Rockhampton, he settled in to the Post Office at Rockhampton where he met his future wife. In the meantime his family had moved to Babinda where, between 1924 and 1926, his father built the family home in Wilkie Street.

Jack was married to Lilian Pugh in 1929



Jack Wilkie's house in Wilkie Street, Babinda.



Wilkie's Hill near Croydon.

at Rockhampton and the newlyweds came by ship to Cairns and settled in Babinda where Jack found work in the sugar mill. During the slack seasons at the mill he prospected for gold and it was then he got to know intimately the Bellenden Ker Range and adjacent areas that he was later to prospect for rare and undescribed orchids.

In 1931 in company with W.H. Kraft, Jack discovered the Bartle Frere Goldfield; the Krawil lease was the first of many with which he was associated. By 1939 he had made enough money from mining to build his house in Wilkie Street next to the family home. For more than forty years this house was a mecca for all orchid lovers visiting the district.

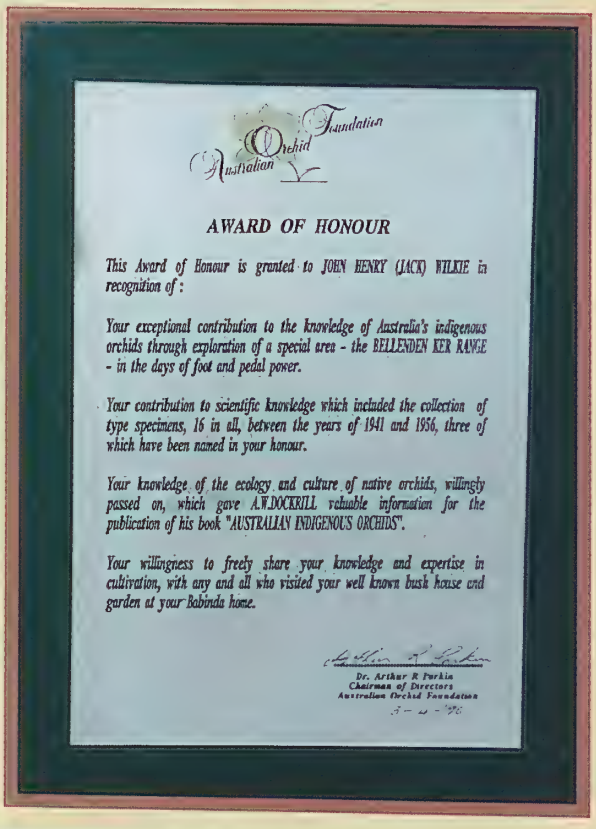
Jack became an engine driver for Babinda Mill; his favourite engine was a large German one nicknamed "The Kaiser". Around this time he met two people who introduced him to orchids: Bill Tierney of Cairns, a fellow engine-driver, and Bob Giddins of Babinda. He soon became a keen grower, and importer and exporter of orchid plants, and his bush-house and garden were much visited and his expertise sought by many including southern visitors.

His speciality was the flora, including orchids, of the Bellenden Ker Range. He climbed Mt. Bellenden Ker on occasions and it was he who cut the track for installation of the cable-car. He was famous for his climbing of Mt. Bartle Frere, which he last climbed at the age of 79 years. He cut the original walking track from the Babinda side to the summit.

Recognised as the authority on the ecology and culture of the orchids of north-east Queensland, Jack willingly passed on this mantle upon the publication of *Australian Indigenous Orchids* by A.W. Dockrill, to whom he had rendered invaluable assistance.

The appearance of his name on sixteen type-specimens (on thirteen as the sole collector) is a measure of his contribution to our knowledge of native orchids, a contribution all the more valuable for being performed mostly on foot or bicycle.

Included among his colleagues have been: Alick Dockrill, Atherton; Dr. Bob



Australian Orchid Foundation

AWARD OF HONOUR

This Award of Honour is granted to JOHN HENRY (JACK) WILKIE in recognition of:

Your exceptional contribution to the knowledge of Australia's indigenous orchids through exploration of a special area - the BELLENDEN KER RANGE - in the days of foot and pedal power.

Your contribution to scientific knowledge which included the collection of type specimens, 16 in all, between the years of 1941 and 1956, three of which have been named in your honour.

Your knowledge of the ecology and culture of native orchids, willingly passed on, which gave A.W.DOCKRILL valuable information for the publication of his book "AUSTRALIAN INDIGENOUS ORCHIDS".

Your willingness to freely share your knowledge and expertise in cultivation, with any and all who visited your well known bush house and garden at your Babinda home.

Dr. Arthur R Parkin
Chairman of Directors
Australian Orchid Foundation

A Pioneers Honour

by Ray Robinson

Jack Wilkie is one of North Queenslands true pioneers and has certainly contributed greatly to the knowledge and discovery of many North Queenslands indigenous orchids.

On Sunday the 28th April 1996 at the Townsville residence of Peter and Anna Pavia, the Australian Orchid Foundation recognised this fact by presenting John Henry (Jack) Wilkie with an "Award of Honour".

After a welcome and introduction, by A.O.F. member Len Lawler, the presentation was made by senior member of the research committee of the A.O.F. Dr. Bill Lavarack, on behalf of the chairman, directors, and A.O.F. members in front of a crowd of 50 local orchid identities, friends and members. Visitors came from as far afield as Cairns, Atherton, Babinda and Innisfail for the occasion.

Among those present was notable orchid taxonomist Alick Dockrill. Jack was responsible for supplying many orchid specimens and information to Alick in preparation of Alick's many publications.

Jack Wilkie now joins recipients of the Award: Herman Slade, Gerald McCraith, the late Bill Murdock, Alick Dockrill and the late Ken McPherson. ■

Ray Robinson
23 Canara Street
Cranbrook Qld 4814

Type Collections of J.H. Wilkie

Year	Location	Taxon
1941	Babinda	*Dendrobium wilkianum*
1945	Babinda	*Dendrobium luteocilium*
1946	Bartle Frere	*Bulbophyllum wanjurum*
1946	Bartle Frere	*Bulbophyllum whitei*
1946	Bartle Frere	*Bulbophyllum wilkianum*
1946	Bellenden Ker	*Dendrobium cancroides*
1946	Bellenden Ker	*Eria queenslandica*
1946	Bartle Frere	*Liparis bracteata*
1946	Babinda	*Taeniophyllum cymbiforme*
1946	Babinda	*Taeniophyllum wilkianum*
1947	Bellenden Ker	*Phaius pictus*
1949	Babinda	*Eria inornata*
1951	Bellenden Ker	*Dendrobium fusiforme* var. *fusiforme* forma *magnifica*
1952 1	Babinda	*Eria linariiflora*
1953 2	Ravenshoe	*Taeniophyllum flavum*
1956 3	Davies Creek	*Bulbophyllum macphersonii* var. *spathulatum*

1. with N. Loader
2. with S. St. Cloud
3. with a party

Hay, Babinda; Jack Jellatt, Edmonton; Johnny Jones, Cairns; Ken MacPherson, Proserpine; Andree Millar, formerly of Lae; Bobby Nevins, Kuranda; George Nix, Cairns; Ian Raywood, Gold Coast; Rev. H. Rupp, Sydney; Jack Wallis, Innisfail; Len Webb, C.S.I.R.O. Brisbane; and Arthur Wilkie, Cairns. This list is by no means exhaustive.

L.J. Lawler
P.O. Box 58
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Left to right: Alick Dockrill, Lynn Shepherd, Ruth Lewis (Jack's daughter), Len Lawler, Bill Lavarack and seated Jack Wilkie.

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Dendrobium gouldii Reichb.f.

This species is variously known as "Bougainville white" and "Gaudalcanal gold" and this diversity in common names gives a hint of the nature of this most attractive species. It is one of the most variable species around in terms of flower colour. The form shown here is representative of those from Gaudalcanal in the Solomons which are variable in themselves, but usually display largely gold flowers with chocolate tips to the petals. On Bougainville the plants tend to be predominantly white with purple veining on the lip. Other forms with different combinations occur, often the form from an individual island is unique, there has been some transporting of plants from island to island by the local people so that it is sometimes difficult to be sure of the origin of some plants. The flowers are variable in size up to five centimetres across and last for about six weeks, making it a very attractive plant in cultivation.

D.gouldii is a large robust species with pseudobulbs growing to a little less than two metres tall. The plant growth is typical of many members of the section *Spatulata* such as *D.discolor, D.helix, D.lineale,* and *D.wulaiense* all of which are closely related to this species.

It grows on rocks or on trees and is quite an abundant species in coastal and semi-coastal situations. It is most common in lowland rainforest and coconut plantations, but has been recorded up to 700 metres. In the Solomon Islands it grows on limestone cliffs overhanging the sea and, on many islands, it is a feature on *Calophyllum* trees which line the beaches.

It is an easy species to grow in the Australian tropics, doing well in a large pot of bark or other freely draining mixture. The addition of some moisture retaining material, such as *Sphagnum*, to the upper parts of the mix can be useful, depending on watering frequency. In the tropics it does very well firmly tied to a suitable tree. It is a large plant and can be a problem in a small bush house, but the long-lasting and colourful flowers make it worth the space. It needs good light to flower well and is probably intolerant of frosts or exposure to the cold westerly winds which occur south of the central coast of Queensland. It should be watered fairly consistently throughout the year, but is best kept dry if the weather turns cold. The base of the pseudobulbs should be kept above the potting mixture to avoid problems of rot due to the moist conditions. Regular fertilising seems to be beneficial to growth. In common with other species in this group, it is subject to attack by dendrobium beetle which can be a problem if it is grown outside the bush house.





Top: *Den. gouldii* 'Guadalcanal' — *Photo: P. Lavarack.* **Below:** *Den. gouldii* 'blue' — *Photo: George Valmadree*

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Den. gouldii 'Yellow/black horns' — *Photo: George Valmadree*

There has been much controversy over the correct name for this species, in particular whether it is synonymous with the white flowered plant from Papua New Guinea which is now known as *D.lineale*. H.G. Reichenbach described *D.gouldii* in 1867 from a plant collected in the Solomon Islands by John Gould Veitch. For many years prior to Dr Phillip Cribb's revision of the section *Spatulata* in 1986, there was confusion surrounding this name and several others. Dr Cribb, after a careful analysis, concluded that there are two separate species — *D.gouldii* (synonym *D.imthurnii)* occurring from New Ireland to the Solomon Islands and *D.lineale* (synonym *D.veratrifolium)* occurring along the north eastern coast of New Guinea from just on the western side of the border to about Milne Bay.

Further reading

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Reichenbach, H.G. (1867) Gardener's Chronicle: 901.

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Shoalhaven Orchid Society 40th Anniversary

by Alan W. Stephenson

The following is a summary of the Fortieth Anniversary Dinner of the Shoalhaven Orchid Society.

When all persons were present at the Nowra Golf Club at the appointed time it seemed a long time since the thought first echoed around the committee table.

Some months has passed between idea and actuality but time always seems to pass quickly when events are in the planning.

The Nowra Golf Club is an excellent venue for these occasions as it is tucked away from the mainstream of activity and which ever direction one chose to look, a pleasant view was assured, whether over the golf course or the Shoalhaven River.

Sixty four persons attended, including the Presidents of three neighbouring societies, Wollongong, Kiama and Eurobodalla.

Mr David Wallace represented the Orchid Society of New South Wales and offered congratulation from that body on the attainment of forty years as a productive society. He also attended in the capacity of a long time friend, show judge and guest speaker to our society.

A display of orchids was constructed prior to the evening by John Apperley, Stuart Crowther and Alan Stephenson. This proved a good backdrop for local newspapers photographers. As a focal point to the display, several trophies and ribbons from years gone by were used.

Memorabilia in the form of newspaper cuttings and show schedules were spread over two large tables. these dated from 1954, two prior to the foundation of the society.

Vice President Barry Hicks acted in the capacity of Master of Ceremonies for the evening welcoming members and guests to the dinner. Barry also made favourable comment on the birthday cake made by Mary Russell and decorated by Del Hicks with flowers provided by John Apperley. All those who consumed this treat gave testament to the cake being more than decoration.

Secretary Del Hicks offered messages of congratulations from several societies including Canberra, Eurobodalla and the Sapphire Coast.

The first presentation of the evening was to President John Apperley. This was a book written on the history of the Shoalhaven Orchid Society. It was written by Publicity officer Alan Stephenson and is called "The First Forty Years".

The President then proceeded to give a brief over view of the forty years thus far. Most were surprised to find the original meeting venue was then a working Fire Station with the plant being displayed on the running boards of the fire truck.

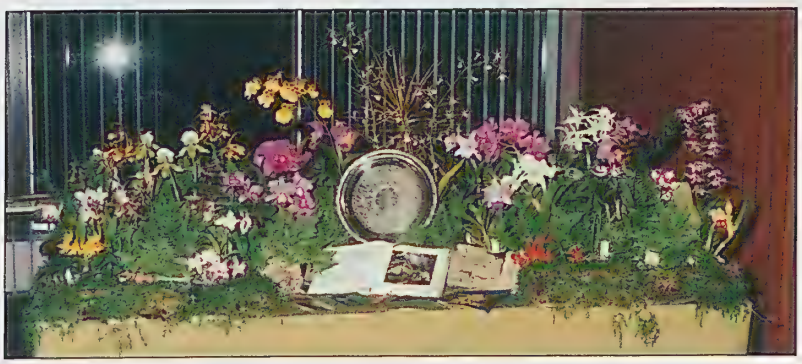
Another memory which resulted is laughter, came from the meeting which founded the society. Several members from a nearby society came to this meeting to give moral support to the prospective members, bringing with them numerous flowering orchids. These orchids were not grown in the terracotta pots of the day but were floriferously resplendent in disused sanitary pans. An awe inspiring sight.

A surprise presentation was then made to long serving member, Alf Grady. Alf was honoured with life membership of the society in a presentation by President John Apperley. Alf has been one of those people who have given service to the society from the moment he joined in 1973 and is well deserving of this award.

The evening was considered a success by all who attended with the food and company as good as the venue.

We now look forward to participating in another such evening to celebrate fifty years in 2006.

Alan W. Stephenson
Publicity Officer



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Two Views of the Orchid-Glen Show

About 8 years ago while talking to Ken Russell at Dungog, NSW, he remarked on the number of native hybrids which flower in Autumn and on the large number of growers and enthusiasts who didn't attend orchid shows. It was on this basis that Ken decided to go ahead with the concept of a Dungog orchid show.

A rough schedule was drawn up, based mainly on native hybrids. It was decided to make the Dungog Showground the venue and we began with a band of enthusiastic volunteers, including Ken's family. The first show was staged in May, with a barbecue, and free tea and coffee to attract the crowd. There were a few other traders at the show besides Orchid-Glen, and looking around the grounds it was wonderful to see people from all over the State sitting talking to each other. We thought that we might be short of plants, so Ken asked people to bring some inter-generic and exotic hybrids to add to the display.

Now, seven years later with the established date as the weekend after Mother's Day and the Dungog High School as the venue it has become an eagerly anticipated event.

Now fully under cover except for the barbecue where most people sit outside and relax, the show caters for some fifteen stall holders with a range of orchids from exotics to species seedlings of all types, native and native hybrids and a range of books. The show is divided into two sections — (A) the Australasian and Australian Native Orchids, judged by A.N.O.S. judges, and (B) the Non-Australian Species and Hybrids, which is judged by A.O.C. judges. The judging usually takes one hour, so we can open the show at 10am and close at 3.30pm, which helps those who have travelled long distances. We had people from Tasmania, Western Australia, Queensland, ACT and as far south as Geelong and Bairnsdale in Victoria; from Sydney, Newcastle and too many areas in rural NSW to list.

We were fortunate this year to attract 67 exhibitors benching 409 plants, with 90 non-exhibition plants on stage. Eighteen people won a prize in Section (A) with another 18 people winning a prize in Section (B).

2050 people came to see *Dendrobium* Elegant Heart x Harold Hirsch grown by George Barrett win Champion Native Hybrid, and *Den. bigibbum* 'Top Hat', grown by Henk van den Berg was Champion Australian Native Species.

In the Non-Australian section, the Champion orchid was *Oncidium onustum* owned by T. and E. Price and the Reserve Champion was another species *Sophronitis brevipenduncula*ta by M. Simpson. Orchids bred by Ken Russell took 21 prizes in all, owned by several people. Well done Ken!

It is interesting to note that 1800 steaks and 1300 sausages (with all the trimmings) were consumed at the barbecue. Speaking of food, we held a small dinner on Saturday evening prior to Sunday's show. What began as a get together for early arrivals and helpers has become a regular and wonderful event. this year 90 people took part and after an excellent Chinese meal and drinks, it was great to see people moving from table to table chatting to each other. If you contemplate visiting next year, I strongly advise that you come on Saturday and attend the dinner — but please book your accommodation well in advance!

See you next year.

Kevin Wilson

Dungog — Same time, Next Year!!

Seems like Wonderland each year at the Annual Dungog Native Orchid Show in May. This year was no exception!! Noeleen and Ken Russell work hard to present the show and we work hard to make room on our benches to accommodate the treasures with which we return.

This year *Oncidium* Onustum, grown by T. & E. Price, was awarded Champion Orchid. Golden dancing ladies performed as if to a symphony. Bigibbums, *Sophronitis*, Cuthbertsorias danced to the same tune; along with Australian Native Dendrobiums of varied parentage.

The Show was attended by visitors from all states (one from W.A.) with very good representation from Victoria.



Oncidiums displayed

Last year I felt like Alice in Wonderland, this year I knew I was the same "girl" surrounded by Natures Magic — but, of course, more aware of the Cabbages and Kings!

It is amazing to realise that flowers lead to such friendships, and I am pleased to be part of this scenario.

Congratulations again to Noeleen and Ken Russell — see you Next Year!. The weekend after Mothers Day!!!

Tess Slater

Gympie and District Orchid Show

The Gympie Orchid Society held its annual show on 26 and 27 April in the Gympie Civic Centre. The annual show is held at the peak of the hardcane Dendrobium flowering season. This year the lead-up weather was unusually hot and without rain and the quality of flowers was high but flowering was later than usual.

Reserve Champion orchid was *Dendrobium* Halawa Beauty x *D.* Jester shown by John and Narelle Hoffmann of Maryborough. This was a great *spatulata* style intermediate dendrobium.

Champion orchid was *Blc.* Juneau Fry grown by Keith and Rosemary Gowlett of Caloundra. This plant had two large flat flowers and had previously won the class "Cattleya — pink/mauve/purple."

One of the more uncommon orchids on display was *Epi. stenopetalum* which won the Sub Tropic Orchid Council's Trophy for best species. This was shown by local President Merv and Hazel Collins. They also won the inaugural June McIntosh Memorial Trophy for the highest pointed orchid in a Gympie display with *Lc.* Little Susie.



Champion Orchid of the show was *Blc.* Juneau Fry grown by Keith and Rosemary Gowlett of the Sunshine Coast Orchid Society in Caloundra — *Photo: Dawn Langton.*

The Orchid displays by societies from Hervey Bay, Noosa, Maryborough, Caloundra and Nambour bolstered the show and were leaders in quality and arrangement.

John Rees

Mornington Peninsula Orchid Society

As I walked into the hall relieved to be out of the chilly night air, I was pleasantly surprised with all the preparations going on for our May Shows. Two main stands; one from Berwick Orchid Club, the other from Southern Suburbs Orchid Society and six islands of orchids from Mornington Peninsula Orchid Society made up the display at the Frankston High School Hall.

At a glance, it looked as though the Cattleyas, Odontoglossums, Oncidiums and yellow intermediate Cymbidiums dominated the Show. However, on closer inspection there was a diversity of orchids for this time of year from Masdevallias, Paphiopedilums to Australian native hybrids.

Grand Champion of the Show, Champion Any Other Hybrid and Champion Open Section went to a well displayed *Oncidium* Palmyre 'Belvedere AM' for R. Grant. Reserve Champion went to a much talked about and admired *Lc.* Little Suzie 'Onchidglade' for R. & L. Lobb. The O.S.C.O.V. medal for most noteworthy plant and Champion Specimen went to a lovely well displayed *C.* Brownide owned by Kantu Rama. This orchid had light pink flowers held well above the foliage forming a gorgeous canopy — something every Cattleya grower aspires to.

Champion Seedling went to D. & C. Allen for their newly awarded *Paph.* Delrosi "Raspberry Ripple" HCC/OSCOV a well grown and presented orchid.

Of note was the Champion Advanced Section orchid, *Paph. insigne* belonging to R. & G. Ingram. Not only was the plant well grown and the flowers well displayed around the pot, but it was a mammoth tussle between this orchid and E. & V. Pearceé *Cym. erythrostylum* which eventually took out Champion Species. Lastly, our very own Brendan Larkin took out Champion Junior with a brightly coloured *Masdevallia ignea.*

Thank you to Berwick and Southern Suburbs for contributing to our Show with their lovely stands and to Mornington Peninsula club members for making this Show possible.

C. Kozlowski
Publicity Officer M.P.O.S.

The Orchid Society of NSW

The second autumn show held by the O.S.N.S.W. Ltd was staged at Darling Harbour, Sydney in April 1996.

Many thanks go to Total Concepts Darling Harbour for sponsoring the Show.

Overall the show was a great success with a blaze of colour from the diverse number of plants making up the nine displays set up by the affiliated societies, individuals and commercial growers.

Grand Champion was *Blc.* Mahini Yahiro 'Ulu' owned and exhibited by Tom and Edith Price. Tom and Edith struck again with Laelinnae Alliance Champion with the same plant. Champion *Cymbidium* Valentines Love 'Wendy' was also owned by Tom and Edith.



Grand Champion OSNSW Autumn Show *Blc.* Mahini Yahiro 'Ulu'.

One display which drew a lot of attention was that built by Bob McCue and Adrian Brown of a tree approximately 2.5m high, all branches covered with orchids of many different genera. Bob and Adrian had Reserve champion orchid, it being Paphiopedilum Raisin Eyes, also Champion Paphiopedilum. Champion Species went to *Vanda coerulea* K. Irvine.

Champion Vandaceous. Name unknown. Owner J. Ormaecha.

Champion Australasian Native was *sarconopsis* Lavina owned by Lesley and Garrie Bromley.

Champion Oncidunae Hybrid was *Onc.* Lava Flow x *O. crispum* x *O. tigrimum* owned

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Champion Specimen was *Cym.* Mela Zia 'Sky Rocket' x *Cym.* Sun Breeze 'New Era' owned by M. Ferguson.

Champion Dendrobium owned by Barreta Orchids was *Den.* Kristen Ann x *Den.* Udomsri 'Dark Hart'.

Champion other orchid was *Masd.* Peach Fuzz owned by B. and J. Page.

The sales table was well stocked with plants carrying flowers which sold rapidly.

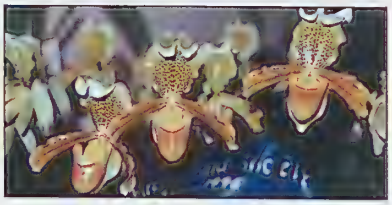
W.F.

Sutherland Shire Orchid Society

Catt's Nursery at Sylvania was again the venue for the Sutherland Shire Orchid Society Autumn Show. As plants steadily arrived and were checked in the show display area began to take shape. One could see this was again going to be a pleasing array of plants showing the great diversity of orchids available to the grower. As with many autumn shows there was a solid line up of paphiopedilums in all colours and sizes. Cymbidiums were also very well represented and amassed a wonderful display along the back wall.

During the course of the four days of the show orchid potting demonstrations, information on orchid growing, plant raffle, and a very well stocked sales table were in operation. This gave members of the public the opportunity to see that in fact many orchids are quite easily grown once the basics of their culture are known.

The major prize winners were Grand Champion of Show and Champion Paphiopedilum, *Paph.* Sunny Tears x *Paph.* Winston Churchill shown by Mr S.T. Ho. This was a very large beautifully symmetrical spotted complex paph. part of the winning bench top display. Reverse Champion of Show, Champion Species of Show and Champion



Reserve Champion , Champion Species and Champion Intermediate *Paph. insigne* – K. Hughes

Intermediate was *Paph. insigne* shown by Mr. K. Hughes. A wonderful large pot full of a very wide dorsal, nicely coloured form. Champion Cymbidium was *Cym.* Cronulla 'The Khan'. Champion Other was *Blc.* Sylvia Fry 'Hameys' both shown by Mr. T.S. Ho. Again these were presented to perfection and the quality was outstanding. Champion Native Orchid was won by Mr. N. Roper with his seedling entry of *Den.* Aussie Angel x *Den.* Sunglow. A large, colourful, shapely flower well presented; one gets the impression it will be a major winner on a large plant. Champion Novice was won by Mrs. S. Hankin with a lovely green and white Paph.

The fascination of orchid blooms were seen on the faces and comments of many who attended the show as they marvelled at the tiny flowers of a Pleurothallis species and the spectacular flowers of the large Cattleya alliance. In all it was a pleasing result, and we look forward to our next show in spring.

Gary Hart

Australian Native Orchid Society (Newcastle group)

For the first time we combined the native and exotic orchids and, it was a great success, attracting approximately 4000 people. The show organised by the A.N.O.S. Newcastle group, was held at the Newcastle Town Hall on April 20th and 21st.

The two groups were judged separately — the natives only by A.N.O.S. judges and the exotics by A.O.C. judges. There were about 400 plants on show, and the standard was very high.

Native section winners were: Champion Bigibbum — Henry Wilson, Champion Hybrid — Ken Russell and Champion Terrestrial — Fred Fear.

Exotic section winners: champion cattleya — Keith Garling, Champion Species — Ken Russell, Champion Dendrobium — Bill Hoogwerf, Champion Vandaceous — Hughie Webb and Champion Any Other Genera — A. Brown.

We intend to hold another show along the same lines on October 12th and 13th.

B.L. Stevenson
Dudley, Newcastle, NSW 2290

Ballarat Orchid Society Inc.

Ballarat Mini Show, Seminar and Orchid Society Council of Victoria meeting was held on Sunday 14th April 1996.

This was the first time Ballarat Orchid Society has run this event and we experienced a few problems. However, the venue was large, airy and warm, the food tasty, and we hope the company friendly. The O.S.C.O.V. meeting was well attended.

We would like to thank all who helped us arrange this day and a special thanks must go to Ern Kettle, Brian Milligan, Issy Klein and Yuntu Haai for their talks and the papers presented.

The three top awards at the show were:

Best Species of Show: *Masd. triangularis* — W. & J. Miles

Best Hybrid of Show: *Lc.* Mini Purple Tamani — Len Harwood

Best Specimen of Show: *Onc. longpipes* — Brian Milligan

Mrs Beryl Johnston (secretary).

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

The Melbourne International Orchid Spectacular

The Orchid family is one of the Largest group of plants on earth and the most widely collected of all plant types. Over the weekend of Friday 16th, Saturday 17th and Sunday 18 August 1996, over 40 of Australia's Orchid Societies, Orchid Nurseries and International Exhibitors have combined to create a spectacular weekend of Orchids. Each society and Nursery will be competing against each other for over $10,000 worth of prizes.

Held at GARDENWORLD, the home of many great shows, this event is attracting international recognition. Visitors will be amazed by the thousands of orchids on display carrying tens of thousands of flowers of all shapes and sizes.

Displays will be presented in a number of categories including Society stands, Theme stands, Table top displays, Floral arrangement and Cut Flowers.

THOUSAND OF RARE AND HIGHLY SOUGHT AFTER PLANTS WILL ALSO BE AVAILABLE FOR SALE DURING THE WEEKEND.

This is an event not to be missed for young and old.

Admission: Adults $3.00 Children free Seniors $1.00 on Friday the 16th.

GARDENWORLD is located at Springvale Road, Keysborough, 3173 ph 03 9798 5845.

Winter Show

The Mornington Peninsula Orchid Society will be holding its Winter Show in the spacious centre mall area of the Cranbourne Park Shopping Centre, High Street, Cranbourne from 5th-10th August this year.

Last year's display was a giant island of orchids. It created a 360 degree view for all shoppers who stopped to admire the orchids on show. There was also a large, well stocked sales area of orchids located on the centre stage which continuously disappeared rapidly as people were keen to buy the many flowering plants on offer.

This year, our show will be even better than last year with club members combining their efforts to impress the public and orchid enthusiasts alike — C. Kozlowski, Publicity Officer M.P.O.S.

Orchid Show Cancelled

Due to unforeseen circumstances the Wanneroo Orchid Societies Forrest Place Orchid Spectacular that was to be held in Perth between 18th August and the 24th August 96 has now been cancelled. — *M. Jess, Hon. Secretary.*

National Cymbidium Show

The Inaugural National Cymbidium Show will be held in the Rural City of Ararat on the weekend of the 7th and 8th September 1996. The Show is the first major event presented by the Australian Cymbidium Society Inc. This event is proudly sponsored by the Rural City of Ararat and will be staged in the Ararat Town Hall, Barkly St. Ararat Victoria.

The National Cymbidium Body, The Australian Cymbidium Society Inc., was formed by the Cymbidium Orchid Society of Victoria Inc., The Cymbidium Club Of South Australia Inc. and The Cymbidium Club of Australia Inc. (N.S.W.), in April 1995. The Cymbidium Club of Western Australia joined this group on the 1st July 1996.

The City of Ararat will be the meeting place for Cymbidium enthusiasts from all over Australia. This event will give growers, both commercial and hobbyist, from across Australia a chance to meet and compete in a friendly atmosphere.

The Ararat district is a great holiday destination with numerous tourist attractions. Why not combine a holiday and a visit to the greatest display of Cymbidiums ever seen in one place. — *David Allen COSV Editor.*

1996 Annual Spring Show

The North Brisbane Orchid Society Inc. will stage its 1996 Annual Spring Orchid Show in the Auditorium, Brisbane Botanic Gardens, Mt

The J. Jezierski Memorial Trophy



J. Jezierski

It is my pleasure to introduce a new sponsorship commencing this year in Victoria for all Cymbidium growers.

Through OSCOV, The J. Jezierski Memorial Trophy will be awarded to The Victorian Cymbidium of the Year. The same procedures and criteria OSCOV uses for judging the Victorian Cymbidium of the year will still apply, the only difference now is that amongst the usual award items issued to the winner there will now be a cash/cheque prize to the value of $100.00.

Having been an orchid grower Mr. Jezierski was a one time member of various Victorian clubs and societies. He was not a prominent orchid grower and was no where near famous in so far as being an "orchid personality" for that matter. Simply, he was a man who loved orchids, especially standard Cymbidiums.

Eleven years ago, he had started me off with a small potted *Dendrobium kingianum*. Throughout the years and through his generosity, I began acquiring orchids, a Cymbidium here, a Dendrobium there and I found my collection slowly being built. It is important I believe, for any Novice grower starting out to be taught correctly in every aspect of orchid culture, maintenance and parentage. The sharing of that knowledge was yet another aspect of his generosity.

At his home in the western suburb of Laverton was an extensive collection of orchids. A huge under cover area adjoining the rear and side of the house was filled with Standard, Intermediate and Miniature Cymbidiums, Dendrobiums, and hundreds of seedlings with the occasional Sarcochilus thrown in for good measure. A medium sized L shaped hothouse that was under threat of extension with "Paphs", "Cattleyas", "Phallies" and other miscellaneous exotics was incorporated under the roofline. To sit amongst it all in the Spring was truly an experience. It was something I never took for granted. They were the happiest days of my life. So peaceful, so serene one couldn't help but soak up the atmosphere before being interrupted by an orchid which would beckon to you with that "come hither" stare. Many a lengthy discussion was held either in the greenhouse, at the dinner table, or on the swing beside the favourite avocado tree in the backyard. The subject more often than not concerned orchids, or why I should join an Orchid club.

His legacy and memories are something I will treasure. They will no doubt stay with me for the rest of my life as I find my commitments to orchid growing and my clubs ever increasing. Although I miss him terribly, I thank heaven for everything that he was able to impart on me.

Above all, I thank heaven for making him my Godfather. This trophy is dedicated with love, to his memory.

C. Kozlowski

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Miltonia Mericlones (10 to 15cm)	$4.00 Minimum 20 of Each
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THIS AND THAT

Coot-tha on Saturday 31st August and Sunday 1st September.

This year promises a spectacular display of orchids, both Exotic and Australian, as well as Ferns and Bromeliads.

The Show will also feature Floral Art Displays and Sales, a wide range Orchid Plants for sale, from seedlings to flowering plants, Daily Raffles and an Art Union.

Continual Potting Demonstrations will be conducted and expert advice will be given on general culture.

Refreshments will be available including Morning and Afternoon Teas.

The Show will open from 9.00am to 5.00pm on Saturday and from 9.00am to 4.30pm on Sunday. Presentation of Trophies and Prizes will be conducted at the conclusion of Show on Sunday — *Wayne Burow, Secretary.*

Carnival of Flowers Bigger and Better in 1996

Australia's longest-running and best known floral Carnival features a host of new attractions in 1996.

The Australian Carnival of Flowers, to be held in Queensland's 'Garden City' of Toowoomba from September 20 to 29, will include a major new flower show, improved transport arrangements to the city's showpiece gardens, daily lunchtime entertainment and the most spectacular floral parade to be staged in the 47 year history of the Carnival.

For further information please contact: Kerry Reeves (07) 3882 1068.

21st Birthday Celebrations

The Tully & District Orchid Society will be celebrating their 21st birthday on the 14th/15th September at Mullins Sport Centre, Tully Showgrounds.

The Programme for the weekend is as follows:

Saturday:
- Display open from 10.00am to 4.00pm.
- Morning and afternoon teas available.
- Raffle/Lucky Door.
- 2.00pm: Demonstration/Lecture.
- 5-6.00pm: B.B.Q. and social evening.

Sunday:
- 8.30-9.00am. Field Day
- Bush Housing (Bus available).
- Lunch at the Sport Centre.
- Raffle.
- Progressive raffle at afternoon tea.

Further information may be obtained from Diana Miller on (070) 681086.

Gold Coast — Tweed Orchid Fair

23 Commercial Orchid Nurseries and Orchid Suppliers in South East Queensland and Northern NSW have accepted our invitation to present the 2nd Gold Coast—Tweed Orchid Fair at the Civic Centre, cnr. Wharf and Brett Streets, Tweed Heads, on the weekend of 2nd-3rd November, 1996.

Our organising committee consider that this selection of Orchid-connected businesses should present an excellent cross section of orchid genera and associated supplies which would be hard to surpass.

Fair will be open to the public Sat 2nd (9am-5.30pm — Sun 3rd 9am-5.30pm) (NSW Daylight Saving Time).

The venue is in the centre of Tweed Heads, immediately alongside the Tweed Heads Bowls Club and surrounded by free parking. The time chosen, 2nd-3rd November, was picked so that it avoided Society Shows, etc.

The Tweed District Orchid Society Inc. will be co-ordinating a Mini-Show of flowering Orchids, and providing light refreshments — biscuits, sandwiches, tea, coffee and BBQ — all at very reasonable prices.

ENTRY IS FREE.

Don't miss this opportunity to obtain quality orchids and orchid supplies from selected top-quality nurseries — gathered together at the Tweed from as far away as central NSW — Sunshine Coast — Toowoomba and South East Queensland.

For further information please phone me on (07) 55731924 — *Wal Murphy, Co-ordinator.*

The Brisbane Flower Garden Show '96

The show will be held on the 29 August 1996 to 1 September 1996 at the Brisbane Convention and Exhibition Centre, Halls 3 and 4.

Admission will be: Adults $9.00, Children and Pensioners $5.00 and a Family (2 adults and 3 children under 16) $20.00.

For further information contact Debbie Finn Publicity Pty. Ltd. on (02) 326 1011.

Charity Festival of Australian Native Orchids

An open day and show will be held at the Dayboro Community Hall, Bradley Street Dayboro, Qld. on Sunday, 6th October, 1996 from 10.00am to 4.00pm.

Coffee Shop, Restaurant, Cafe and Hotel meals will be available.

Information sessions, on how to look after your orchids and potting demonstrations will run during the day.

Admission is $2.00 for adults, children under 14 free.

Further details are available from Show Sponsor, Frank and Bev Simpson of Simpson Orchids, 29 Gannon Street MT. MEE 4521 Phone 074 982185. Mobile 015 636 289.

Floriade Canberra's Spring Festival

Floriade has always been a magnificent celebration of spring and this year promises to be even better. The theme is "Floriade Celebrates the Arts". Teams of horticulturists and gardeners have been planning and designing stunning displays that pay homage to some of the world's greatest painters, writers, poets and designers. From 14 September to 13 October Commonwealth Park will become a canvas to the horticulturists palate of colourful flowers. They will recreate some of the world's most famous paintings and literary masterpieces.

As part of this year's event there will also be street performers, musicians, dancers, sculptors, painters, poets and story tellers throughout the Park. This is just a taste of what's in store for you at the 1996 Advance Bank Floriade. It's open day and night and admission is free.

For information and brochures call the Floriade FlowerLine on 1800 020 141.

Orchid Festival and Sales

The Yarra Valley Orchid Society Inc presents their 12th Annual Orchid Festival and Sales at the Seville Hall Warburton Highway Seville Victoria (Medways Ref: 119 J11), on Saturday 19th October, 9am-5pm and Sunday 20th October, 10am-4pm.

Devonshire Teas and Light Lunches will be available (including warm food) and plenty of Plants for sale!!

"Come and spend a day in the beautiful Yarra Valley"

Admission is $2.00 for adults, Children Free.

Southern Suburbs Orchid Society Inc

SSOS Inc. meets on the first Wednesday of each month (except January) in the NG Wishart Senior Citizens Hall, Nepean Highway, Moorabbin. The Society extends an invitation to you to join us at any of our meetings. The meetings include an early session for beginners, a flowering Display and a Main Guest speaker for the evening. The night ends with members and visitors enjoying a supper and a chat. We look forward to seeing you at one of our meetings — Carolin Allen. SSOS Editor

Floral Festival

The Cathedral Church of St John Parramatta, NSW will be holding a Festival of Flowers from Thursday 5th September to Saturday 7th September 96.

During the festival there will be entertainment and guided tours of the Cathedral.

It is hoped that this festival will become an annual event.

* * *

A triennial festival of flowers will be held in the precincts of St Mary's Cathedral, St Mary's Rd, Sydney.

His Excellency The Honourable Gordon Samuel AC, Governor of New South Wales will open the festival on Friday 6th September 1996. It closes on 9th September.

More information on this festival can be obtained from Dame Monica Gallagher DBE on (02) 220 0400.

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Cattleyas

During winter we have seen some magnificent blooms at Orchid Societies Winter Shows. Some of the magnificent purples seem to be getting bigger and better every year. Some of these beauties have texture like leather and a sheen like ivory. Some growers have been having cultural success by foliar spraying their plants with K-D-L to enhance their blooms. The extra potassium seems to make the colour a lot richer. DO NOT over do it though or you could have a calcium problem.

Now that the weather should be warming up your plants could have a little more moisture. Once you start to see evidence of growth you can start to give your plants a little foliar fertiliser. You can use GARDEN PARTY® at 3mls per litre of water. This will give your plants a good start for the growing season.

Now is a good time to look for signs of scale insects. Now that spring is in the air scale start to become active. ANTISCALE® can be used or SPRAYTECH recommend the combination of NATRASOAP® and SPRAYTECH OIL®. Remember mix them both together before adding the water.

Cymbidiums

At last spring is nearly with us. Our plants have been in flower all winter and now they are ready to show their best for the spring shows. This is a very exciting year as the Australian Cymbidium Society will be holding the first National Cymbidium Show in Australia. This show will be hosted by the Ararat Orchid Society. It will be held in the Performing Arts Centre, Barkly Street Ararat, Victoria on September 7th and 8th 1996. If you want to see cymbidiums at their best make an effort and be there! On show should be some of the worlds best cymbidiums.

Now is the time to start thinking about dividing those plants that need attention. All plants that need dividing should be placed together on one bench, those that need potting on, on another and mature pots on another. Seedlings should be kept together. Those plants that need dividing should if possible be kept a little on the dry side. This makes it easier to divide the plant. In fact do not water the plant for a week, before dividing. Keep plants in at least three bulb divisions. When potting keep plants reasonably high. Stake if wobbly. Seal all cuts with STERIPRUNE® Give plants a good soak with water and your favourite hormone solution. Then place in a cool airy position. DO NOT overwater and DO NOT fertilise until growth is evident. Remember, please sterilise your cutting implements in STERRI KLEEN® each time you use your implements REMEMBER VIRUS IS CATCHING!!!

I am often asked what compost to buy. The two that I have used successfully are DEBCO MEDIUM BARK and ORCHID CARE SERVICES — MEDIUM BARK and their specialised CYMBIDIUM MIX. These products are suited for the novice as well as the advanced grower.

It is a good idea to remove the flowering raceme two weeks after the last bloom has opened. When the raceme has been removed the plant comes into active growth again.

Culture: Watering weekly should be sufficient unless the weather warms up considerably, especially around the October period. Check compost if damp. Water during morning. Some growers top dress with a 5 to 6 month controlled release fertiliser around this time of the year. Foliar fertiliser can be applied weekly. Use your favourite brew. Horticultural Solutions HSO 22 is a good choice. Use at one gram per litre.

Watch for the first signs of two-spotted mites. Look closely under the foliage. If present spray with ROGOR®, or OMITE®. Read directions carefully before using. Watch for leaf spots. If they look like appearing on the leaves spray with MANCOZEB®. If aphids are present a spot spray with GARDEN DOCTOR® will help to clear them up.

Masdevallia/Dracula

Of all the problems influencing the poor flowering of Pleurothallids in general, the lack of light especially in the Winter causes comments such as "My plants are growing well and vigorously but do not flower" or "The flowers are on long stems and present themselves sideways". Much of Australia, especially the gloomy south, now face the wettest and coldest part of the year. This lack of light will be the cause of much disappointment for many and must be somehow increased if a good showing is to be achieved in the Spring.

Try to find a spot in the enclosure with good light. There should be no problem with burning at this time of year, unless you are a Northern grower, and I would like to point out that there is an increasing number of folk in the North growing these plants.

The cool section of *Masdevallia* and specifically the *Coccineae* section will not be a problem with overnight temperatures going down to 5°C. fairly regularly. Subjecting the plants to frost and sub zero temperatures will however, cause damage so some form of overhead shelter, that will not admit frost, is necessary. Most of my *M.* cocineas are outside where light can be better but for me, frost protection is still of utmost importance.

A position where air movement is present is also most desirable, to assist in drying the plants when needing water, which will be infrequent during the Winter unless some form of heating is installed and many growers do just that keeping Winter minimums to 8 to 10°C.

As well, good air movement must be always present, as it is in the habitat and this will keep fungal problems to a minimum.

Those growers with an expanded collection of species will need to check on country of origin as well as the natural altitude found growing as those emanating from lower down on the Andean slopes will require a little warmth at this time. All *Masdevallia* would benefit from a minimum of 8 to 10°C. if possible, but the intermediate growers demand it, if they are not to be stressed, to the point of dropping leaves and spotting foliage.

I find *Dracula* should be included in the cool/intermediate section for the winter. An average prime temperature range for *Dracula* year round would have to be in the vicinity of 10 to 16°C. They will suffer the colder temperatures but foliage will be badly spotted. Flowering seems not to be affected by this spotting but it is ugly. Spraying with a proven but gentle fungicide can help. If using Physan®, follow the directions for dilution closely as the burning and pitting of leaves can result from too strong a solution. The spotting and black tips should disappear with Spring's new growth.

Growers in southern and the higher altitude areas of Queensland, and northern N.S.W. will notice the plants do particularly well at this time. The climate in these parts, at this time, emulates closely the Andean habitat of moderate temperatures but with high light levels.

Dracula like *Masdevallia,* benefit from air movement during the Winter and as the *Dracula* must be under cover and enclosed, fans will be required. Air movement need not be as vigorous as required during the Summer, however stagnant air will cause fungal problems.

Humidity at this time of year will naturally be high, so the normal watering regime should be sufficient when combined with the natural moisture and humidity levels. Neither genus should dry out during this time but constantly soggy mediums will cause a loss of roots. Dependent upon naturally prevailing conditions and the type of mix used, many growers will only need to water once per week. Inspect the plants regularly however, as many winter winds can be dry enough to have a dessicating effect on both growing medium and air.

At this time, remove the build up of mosses, lichens, liverworts and ferns that may have established upon the top of the medium. Small pots appear to be very prone to this and it is amazing how efficient this covering can be at excluding both air and water. I often find seedling plants in small pots completely dry under the green covering of moss even though I regularly water.

When working on these plants no harm is done at this time, if it is thought beneficial, to move the plants on to the next sized pot.

If *Sphagnum* is your medium, check its condition rather than just wrapping around with new moss and plonking the lot back into the next size pot. Moss that appears brown in colour must be replaced and check the centre of the moss/root ball for rotted off roots and remove them if present. Larger plants benefit from a more open medium so introduce poly-

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styrene granules or stone to open things up a bit. The newly available product of hammer milled polystyrene appears to be performing well. Bear in mind that polystyrene unlike other additives, does not hold water.

When repotting only go up one size as over potting with these plants like most other orchids, is not recommended. The larger pots hold excess water which is not taken up by the small plant, thus roots are lost.

You can feed your Pleurothallids at this time albeit irregularly. A quarter strength at every watering should suffice and many growers reduce the nitrogen content at this time when many species and hybrids will begin to show evidence through bud development of the future flowering season. This season shows all the symptoms of being a good one as although nights have been cold, daytime light levels have been more than experienced over the last few years.

While pests seem not to be greatly fond of the family in general, the sugar rich flowering stems and buds as well as any new growths are often considered "better than nothing" by slugs and snails. Metaldehyde powder dusted or sprayed around the plants at this time gives very effective control. I do not like pellets at any time but in particular, the high humidity Winter environment causes a rapid breakdown of the material with the unsightly moulds and fungi that accompany such a process. Aphids are also a pest on new growths.

Slug/snail sprays, designed to be administered to the medium will also kill the small garlic type snails that will if not checked make holes in the flowers as they begin to open. These crafty critters will feed at night on your potentially award winning blooms, only to disappear from sight into the depths of the medium during the day. Make it a habit, especially after rain, to make nightly inspections before bed and to be doubly sure it may be best to remove that plant with 50 developing spikes to a safer, even hanging position, lest all be gone in the morning!

Natives

Another winter is over and most of the widely grown natives will be coming into bloom over the next few months. Those spikes you've been watching carefully will now develop quickly into flowers. Some of the early starters may already be out, particularly in warmer areas — *Dendrobium teretifolium, D. aemulum, D. melaleucaphilum* and some hybrids.

Those blooms took a long time to develop and the majority do not last long so it is worth a little effort to protect them so they can be enjoyed for as long as possible. Watch out for snails and slugs. These can be easily controlled with a few pellets. Aphids and caterpillars can also be problems. The former suck sap from newly developing growths and can leave flowers deformed, the colour streaked or spotted or even cause bud drop. Another problem in many areas at this time of year is the August Westerlies — strong winds which can cause a lot of damage and dry plants out. As we have strong winds now (beginning of July) it is quite possible that there may be a repeat of the hot August days that occurred last year in eastern states. If this happens buds will develop quickly and plants may flower earlier than normal. If this is the case watch that there is not an accompanying cold change. Take plants indoors if there is or flowers may drop.

Springtime is also showtime and many growers drag out a few plants for the local Society in the hope of winning a prize or two. There are some do's and don'ts which can help make this a pleasant experience, especially for inexperienced growers. These are included here with some general pointers for springtime culture.



Do

- bring plants indoors to enjoy but be aware that the perfume of some can be overpowering — *D. falcorostrum, D. speciosum* complex — or even unpleasant — *D. melaleucaphilum*. This perfume is also often present in hybrids. It tends to be at its strongest in hot early morning sun.
- exhibit in local shows. Read through the schedule and decide which section you will enter your plants in before the big day. Make a list of the plants you have benched to make collecting them at packup time hassle-free. Use boxes to transport plant and pack them in with balls of newspaper.
- clean up plants. Remove dead growths, leaves and old flower spikes.
- be sure you aren't introducing unwanted passengers to neighbouring plants on the showbench or spreading them throughout your collection.
- begin to increase water according to local weather conditions. Fertiliser should be introduced, particularly after flowering when new growth commences.
- cull plants, seedlings in particular. Be sure to label any promising plants. Any poor plants are better destroyed rather than sold cheap on sale tables.
- pollinate quality plants if you wish to have a go at breeding with your own plants.
- prepare for repotting now and begin after flowering.

Don't

- allow too much water on flowers. Water can mark flowers, weigh down racemes or allow development of *Botrytis* and other problems. White flowers are particularly susceptible. Handwater plants in bloom and even move them to a covered area where they won't get any rain on them if you have the space.
- bench diseased or pest ridden plants.
- pollinate inferior plants or plants which happen to be in bloom just for the sake of having a few pods. The time and effort put into raising seedlings means a little thought and planning is a good investment.

So what makes a good plant?

Have you ever had a plant which you cared for for months which rewarded you with a lot of flowers and you thought it looked just perfect and benched it with pride and confidence only to find that the judges whizzed by without giving it a second glance? Just what went wrong? Judging of a bench full of lovely flowers is often quite difficult but not a random process. Plants are judged according to certain standards. Things considered include:

- The number of flowers. This is course dependent upon the parentage but a hybrid with *Dendrobium speciosum* and *D. falcorostrum* in its recent parentage which only had 2 or 3 flowers per raceme could not be considered a good plant. Consider also the number of racemes produced. A *Dendrobium* hybrid of thirty or so pseudobulbs should produce more than one or two racemes. It should be covered with flowers unless it has for example *D. monophyllum* which tends to flower from new growths or another scanty flowering species in its parentage.
- The size of the flowers is also important. A hybrid which has flowers smaller than those of its parents is usually not considered a good plant. Flowers should open out flat but not recurve or bend backwards. Cuppy flowers and recurving may be a seasonal problem caused by cold weather. In general hybrids (and many species now) should have well rounded segments although this is obviously not expected of plants with, for example, *D. capitisyork* or *Rhinerrhiza divitiflora* in their parentage. *Dendrobium melaleucaphilum* and *D. capitisyork* can tend to introduce "twisted hips" a problem which can be aggravated by cold weather.
- Flowers should have what is termed good substance and texture. That is, they should be chunky and solid looking and not look dehydrated or wispy. "Meaty" is a word often used to describe this. It can be hard to describe but it is instantly recognisable.
- With heavy flowers it is important also that the raceme can support them. Flowers should not be facing the floor but looking up or out depending on the habit of the raceme. Some species have racemes which are naturally upright *(D. canaliculatum)*, while others are arching *(D. speciosum)* or pendulous (epiphytic *Sarcs.)*. For hybrids the type of raceme is very much dependent upon parentage. However, flowers should be clear of the foliage and not buried under a mass of greenery. This is of importance for hybrids but is dependent upon the typical appearance in the case of species.
- The labellum can make or break a flower. In the case of hybrid Dendrobiums it is ideally broad and widely opening. It neither curls upwards nor rolls under. It should also be in proportion to the other segments. In reality it is dependent upon the parentage as many hybrids are not far enough developed as yet for some species influences to be removed. In the case of species it is often the nature of the species to have a twisted or curling labellum — *D. fairfaxii, D. dolichophyllum,* and the "antelope" dendrobiums — and they would be considered deformed if they didn't do this.
- As surprising as it may seem, the colour is

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perhaps the least important feature. While there are often new colour combinations or effects (eg. spotting) which grab everyones attention the overall colour should be simply pleasing. Colour should be clear and not blurred or muddied. Any markings should be even (colour break can be a sign of virus or the result of aphid attack). The strength of colour is often dependent upon the chunkiness of the flower. Paper thin flowers will probably have weak colour.

Finally, beauty is in the eye of the beholder. You are quite free to grow and enjoy your plants according to your own taste. I have plants which won't win at shows but I keep them for sentimental value or simply because I like them the way they are. The above comments are only to provide some idea as to why your plant may not be a Grand Champion. Remember that there are also cultural awards and it is worth benching plants to support a local society show. Species plants should be cared for and grown simply to preserve genetic diversity and not merely to win prize certificates.

Paphiopedilum

Routine culture during late winter is much the same as for the previous few months. Plants should be watered only when moderately dry and given some weak Aquasol immediately after every third or fourth watering. Watch the weather — the westerly winds which characterise this time of the year can dry plants out quite quickly. Watering is best done during early morning.

Paphiopedilums benefit greatly from annual repotting. The slight shock of repotting encourages the growth of a new crop of roots which may otherwise not appear. The best time for repotting is from mid-September until late November.

The potting mix should be prepared a few weeks before use; this allows the bark to begin breaking down — a condition which your Paphs, will appreciate.

Whilst Paphs. can be grown successfully in a variety of materials, I have had best results using mixtures based on bark. A very good mixture consists of the following:

Pine Bark (approx. 5 — 10mm).....80%
Charcoal (approx 5 — 10mm) 20%
Add to this:
Sel Grit (granular limestone)
or bird grade shell grit.....2%
Hoof and Horn Meal (or, at a pinch,
Blood and Bone) 1%

Wet the bark and charcoal with normal strength Aquasol, add the other ingredients and mix thoroughly. The mixture should be kept damp (use water from here on) until ready for use and must be used fairly wet. if you cannot store the mixture in an area free from earthworm and other vermin, it may be better stored in open plastic bags. If available, about 10% coarse river gravel can be added; the weight of this helps prevent the pots from tipping over.

If you have only a few plants, or all this sounds like too much trouble, you local Orchid nursery may be able to supply a similar mixture. When buying potting mixtures always make sure they do contain plenty of nitrogenous fertiliser (have a good sniff) as bark alone contains very little that the plants can feed on.

Squat plastic pots are the most suitable for Paphiopedilums, particularly those with domed bottoms and plenty of drainage holes — not only for drainage but for aeration. A pot should be chosen which will comfortably hold the roots. The plant should be potted firmly with its base about 12mm below the surface. If the plant is wobbly, stake it. Do not use Osmocote or the like on Paphiopedilums.

When dividing Paphiopedilums I always try to leave two flowered growth plus whatever newer growths are ahead of these. The older flower growth can be "back cut" and left in the pot during January.

Newly repotted plants are simply placed on the bench and watered and fertilised as before. The plants do not need to be widely spaced. Incidentally, open benching (say 3 x 1 Weldmesh) is far preferable and gives much better results than the solid benching once favoured.

Phalaenopsis

Watering:— Water *only* in mornings every 3 days. Mist foliage on hot windy days. Increase watering if weather starts to heat up. Do *not* leave water in crown of plants. Water floor to keep up humidity if necessary.

Light:— Leave shade at 70% until weather starts to warm up, then increase to 90%.

Fertilisers:— Fertilise fortnightly using Campbells A, Aqua-K or Phostrogen.

Pest Control:— Continue to fungicide every 6 weeks. Use Diazanon or Pyrethrum to control scale and insect pests.

Keep a close watch for mites and treat with a miticide as necessary.

General:— Plants should be in full bloom during these months. Remember to stake the spikes for best displays. Do not spray flowers with water or fungicides and keep under cover as much as possible to avoid spotting.

Vandaceous

Watering:— Water well in the morning every 2 to 3 days. Avoid watering on cold or bleak days. Root systems should be kept moist and may require misting on dry, windy days particularly if potted only in bare baskets or pots.

Light:— Strap leaf vandas and ascocendas need 50% shade. Outside vandas need very little cover at this time of year.

Fertiliser:— Fertilise once per fortnight during August using a low nitrogen fertiliser.

Increase to weekly during September, changing to a high nitrogen fertiliser and alternating over a 4 weekly period:—

Wk.1.— Inorganic high nitrogen — Campbells B or Aqua-feed.

Wk.2.— Foliar/Trace elements — Wuxall.

Wk.3.— Inorganic high nitrogen — as for week 1.

Wk.4.— Organic — Fish emulsion or Nitrosol.

Pest Control:— Continue to spray with fungicide every 6 weeks (e.g Ridomil MZ WP, Daconil or Mancozeb).

Spray with Diazanon or Pyrethrum if signs of insect damage.

Watch for mite damage and treat as necessary.

New Orchid Hybrids

NOVEMBER/DECEMBER 1995 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
ALICEARA		
Carnival of Scorpions	*Alcra.* Pacesetter × *Onc.* Honolulu	Beall
ASCOCENDA		
Gold Chai	*V.* Rasri Gold × *Ascda.* Guo Chia Long	Brighton Nursery
Kwa Geok Choo	*Ascda.* Amelita Ramos × *V.* Harvest Time	Singapore Bot. Gdns.
BLOOMARA		
Mimi	*Bro. sanguinea* × *Ttps.* Candystripe	Dr L. Schott
BRASSIDIUM		
Pauline Lee	*Brs. caudata* × *Onc. maculatum*	M. J. Lee
BRASSOCATTLEYA		
Dal's Victory	*C.* Toowong × *Bc.* Island Charm	D. & B. Littman
BRASSOLAELIOCATTLEYA		
Alice Escobar	*Blc.* Erin Kobayashi × *Lc.* Manilavale	C. A. Escobar (J. Escobar)
Alton Mote	*Lc.* Lorraine Shirai × *Blc.* Oconee	M. Ragan
Boy's Grotto	*Lc.* Blue Boy × *Blc.* Blue Grotto	Kokusai (O/U)
Cosmo-Button	*Lc.* Button Top × *Blc.* George King	Kokusai
Dal's Chance	*C.* Narooma × *Blc.* Chancemaker	D. & B. Littman
Dal's Dynamite	*Lc.* Mari's Song × *Blc.* Sylvia Fry	D. & B. Littman
Dal's Fancy	*Blc.* Fantasy Maker × *C.* Toowong	D. & B. Littman
Dal's Girl	*C.* Narooma × *Blc.* Mount Sylvan	D. & B. Littman
Dal's Kew	*C.* Kew × *Blc.* Chancemaker	D. & B. Littman
Dal's Masterpiece	*C.* Inez Okimoto × *Blc.* Mount Sylvan	D. & B. Littman
Dal's Mystery	*C.* Toowong × *Blc.* Erin Kobayashi	D. & B. Littman
Dal's Premier	*Blc.* Dundas × *Blc.* Mount Sylvan	D. & B. Littman
Dal's Rapture	*Blc.* Meditation × *Lc.* Shellie Compton	D. & B. Littman
David Dolge	*Lc.* Mary Ellen Carter × *Blc.* Toshie Aoki	Carter & Holmes
Encanto de Borinquen	*Blc.* Memoria Crispin Rosales × *C.* Dark Emperor	R. Sobrino
Golden Globe	*Blc.* Bouton D'Or × *Lc.* Anvil Peak	Carter & Holmes
Kazu Dream	*C. walkeriana* × *Blc.* Success Dream	K. Bessho
Ladda Delight	*Blc.* Ports of Paradise × *Blc.* Rattanakosin	T. Orchids (S. Phadungvit)
Larry's Gold	*Blc.* Malworth × *Bl.* Richard Mueller	D. Deardorff
Mama Consuelo	*Lc.* Wailea × *Blc.* Astronaut Carpenter	J. Izquierdo (O/U)
Mangkorn Pink	*Blc.* Elizabeth Hearn × *C.* Tiffin Bells	M. Loha-Udom
Mater Ter Admirabilis	*Blc.* Mama Consuelo × *Lc.* Hawaiian Favourite	J. Izquierdo (O/U)
Memoria Rosario Castro	*C.* Old Whitey × *Blc.* Oconee	R. Sobrino
Michael Crocker	*Blc.* Lake Murray × *Blc.* Mac Holmes	Carter & Holmes
Nora Dyke	*Lc.* Mattie Shave × *Blc.* Oconee	Carter & Holmes
Panache La Jolla	*Bc.* Memoria Hayley Vaughn × *Blc.* Iliad	J. Walters
Pisgah Gold Rush	*Blc.* Toshie Aoki × *Blc.* Apricot Flare	Owens Orchids
Vickie Denton	*Blc.* Yonges Island × *Blc.* Star of Bethlehem	Carter & Holmes
CATTLEYA		
Aloha Venessa Jean	Tropical Angel × *walkeriana*	B. Gerhard (J. Woltmon)
Dal's Gift	Bella Blanca × Toowong	D. & B. Littman
Dal's Gloss	Toowong × Interglossa	D. & B. Littman
Fred McElveen	Fort Motte × Brabantiae	Carter & Holmes
Johnette Bowers	Swan Lake × Lucille Small	Carter & Holmes
Slim Warner	Lulu × Orglade's Palette	Cairns Orchid Centre
Virginia Ruiz	Francis T.C. Au × Tiffin Bells	S. Barani
CIRRHOPHYLLUM		
Sunshine Queen	*Cirr. mastersianum* × *Bulb. corolliferum* †	Suphachadiwong
CORYANTHES		
MacRosea	*alborosea* † × *macrantha* †	Old Mill
CYCNOCHES		
Rocky Clough	*pentadactylon* × *egertonianum*	G. Carr (H & R Nurs.)

NAME	PARENTAGE	REGISTERED BY
CYMBIDIUM		
Aloannie	Ann Miller × *aloifolium*	J. Walters
Cape Giant	Faircape × Vanguard	Duckitt (Meeuwissen)
Carileen	Mayleen × Cariland	Duckitt
Double Diamond	Cinnabar × Vivien Hainsworth	Glen. O. Acres (Keith Andrew)
Glenwood Glow	Ora Lee × Thanksgiving	Glen. O. Acres
Glenwood Gold	Woodalda × Coraki	Glen. O. Acres (Keith Andrew)
Golden Armstrong	Golden Elf × Rose Armstrong	Mukoyama
Grand Sumo	Roi Soleil × Claude Pepper	Glen. O. Acres (Keith Andrew)
Johnston's Gem	Wallamurra × Red Beauty	Johnston Orchids
Julie Hawkes	Red Beauty × Kelly's Winter	V. Haskard
Lanaland	Lana × Cariland	Duckitt
Olinda Jewel	Srinagar × *parishii*	Glen. O. Acres (Keith Andrew)
Paarleen	Mayleen × Paarl Perle	Duckitt
Parish Rose	*parishii* × Western Rose	Glen. O. Acres (Keith Andrew)
Paytons Wonder	Winter Wonder × Sleeping Beauty	M. Weston (Easy Orchids)
Petite Fifi	Olive Street × Kuranda	Glen. O. Acres (Keith Andrew)
Vanaker	Vanguard × Stanley Fouraker	Duckitt (Meeuwissen)
DACTYLORHIZA		
Palmengarten	*majalis* × *purpurella*	H. Beyrle
DENDROBIUM		
Challenger	Christmas Chime × Milky Way	S. Nagase
Colorado Springs	Japanese Saga × Yodogimi	S. Nagase
Gerald McCraith	*engae* × *convolutum*	P. Spence
Gerrit's Choice	Elated × Jester	Cairns Orchid Centre
Golden Years	Hoshimusume × Hambühren Gold	S. Nagase
Heartwood	David Copperfield × Hawaiian Heart	Hawaiian Fl. Nurs. (D. Sugita)
Lion Heart	David Copperfield × Anching Lubag	Hawaiian Fl. Nurs. (D. Sugita)
Milky Road	Japanese Saga × Toshiro Kobayashi	S. Nagase
Paula's Pride	Colonial Summit × Fiestafal	G. Leafberg
Post Printing	Impact × *convolutum*	P. Spence
Queen of Brighton	Queen Southeast × *formosum*	Brighton Nursery
Richard's Glory	Emma × Sunglow	G. Leafberg
San Flake	Snowflake × Sancyao	S. Nagase
Solar Eclipse	Aiko Sukimoto × Rick Valley	Hawaii Pacific (T. Okinaka)
South Pacific	*miyakei* × *pseudoglomeratum*	D. & M. Crawford
Stanwell Floor	Manichote × Elegant Midnight	J. Latten
Tom Nelson's Sunrise	Kristen Ann × Kuranda Classic	Sunrise Orch. Soc. (R. T. Fukumura)
Total Eclipse	Rung Roeng × Classic Gem	Kasetsart Univ.
Vimarn	Mary Trowse × Jiad Gold	T. Orchids
Woodgate Gem	Minnie × *undulatum*	G. Rex
DISA		
Witzenberg	Unilangley × Trikew	Duckitt
DORITAENOPSIS		
Asteroid	*Dtps.* Jason Beard × *Phal.* Carter Shenk	Carter & Holmes (O/U)
Bavarian Surprise	*Dtps.* Hans Koch × *Phal.* Bavarian Delight	W. H. Kaiser
Drayton Hall	*Dtps.* Thankful Heart × *Phal.* Bright Lights	Carter & Holmes
Festive Dawn	*Dtps.* Fair Dawn × *Phal.* Festive Mood	W. Losert (Hausermann)
Fritz Hölzl	*Dtps.* Little Debbi × *Dtps.* Lynda Rae Resnick	Cramer
High Intensity	*Dtps.* Fiesta Pacifica × *Dtps.* Veracruz	Orchid Zone (M. Pendleton)
Line Ngo	*Dtps.* Ton Jy Pecan × *Phal.* New Eagle	N'go Orchids (O/U)
Malibu Canyon	*Phal.* Gallant Beau × *Dtps.* Veracruz	Zuma Canyon
Malibu Fashion	*Dtps.* Zuma White Puff × *Dtps.* Zuma Keepsake	Zuma Canyon
Malibu Gem	*Phal. venosa* × *Dtps.* Ramsden	Zuma Canyon
Malibu Halo	*Phal.* Glad Melinda × *Dtps.* Acapulco	Zuma Canyon
Malibu Heartbeat	*Dtps.* Kiska × *Dtps.* Quevedo	Zuma Canyon
Malibu Idyl	*Dtps.* Navarre Gem × *Phal.* Kathleen Ai	Zuma Canyon
Malibu Odyssey	*Phal.* Carvarolle × *Dtps.* Ramsden	Zuma Canyon
Malibu Prince	*Dtps.* Kobe × *Phal.* Prince Puck	Zuma Canyon
Malibu Shore	*Phal.* Lippegruss × *Dtps.* Luminescent	Zuma Canyon
Malibu Socialite	*Dtps.* Duki × *Phal.* Ryne Zimmerman	Zuma Canyon
Malibu Temple	*Dtps.* Alice Loeb × *Dtps.* Quevedo	Zuma Canyon
Malibu Theme	*Phal.* Yolanda Josefa Wever × *Dtps.* Veracruz	Zuma Canyon
Miva Beaute	*Dtps.* Catamiva × *Phal.* Mivac Carissimo	Michel Vacherot
Miva Pegase	*Phal.* Cinnamon Candy × *Dtps.* Marta De Rivilla	Michel Vacherot
Miva Rock	*Phal.* Capella × *Dtps.* Miva Martapi	Michel Vacherot
Pisgah Belle	*Dtps.* Lady Jewel × *Phal.* Memoria Thekla Johnson	Owens Orchids
Pisgah Enchantress	*Dtps.* Pisgah Wonder × *Dtps.* Achy Breaky Heart	Owens Orchids
Struber Classic	*Phal. maculata* × *Dtps.* Lynda Rae Resnick	Cramer
Struber Herz Ass	*Dtps.* Lynda Rae Resnick × *Phal.* Polarlicht	Cramer
Taisuco Paean	*Phal.* Taisuco Hatarot× *Dtps.* Sun-Chen Beauty	W. H. Chen

NAME	PARENTAGE	REGISTERED BY
DORITAENOPSIS continued		
Taisuco Wonder	*Phal.* Taisuco Snow × *Dtps.* White Wonder	W. H. Chen
Way Cool	*Dtps.* John Oltmann × *Phal.* Snow Leopard	J. Soe Nyun
Whisper of Love	*Phal.* James McPherson × *Dtps.* Asteroid	Carter & Holmes
Zuma Angel	*Phal.* Angel White × *Dtps.* White Castle	Zuma Canyon
EPICATTLEYA		
Serendipity	*C.* Chocolate Drop × *Epi. pseudepidendrum*	T. & M. Rakow (Mrs C. Coll)
Stéphanie Giustino Cortez	*Epi. randii* × *C. skinneri*	S. Barani
EPILAELIOPSIS		
Profesor Marcano	*Lps. domingensis* × *Epi. truncatum*	Dr L. Schott
HAMELWELLSARA		
Aussie Quest	*Z.* Titanic × *Hmwsa.* June	Adelaide
**HERSCHELIODISA (Hrds.)*		
Darling Blue	‡ *Hers. lugens* † × *Disa longicornu* †	Duckitt
LAELIOCATONIA		
Dal's Chick	*Ctna.* Why Not × *Lc.* Aussie Sunset	D. & B. Littman
LAELIOCATTLEYA		
Benny Gale Almas	*Lc.* Excellency × *C.* Picturata	M. Ragan
Constance Ann	*Lc.* Culminant × *Lc.* Ptarmigan Ridge	Carter & Holmes
Dal's Hallmark	*C.* Narooma × *Lc.* Prophesy	D. & B. Littman
Dal's Jackpot	*Lc.* Royal Emperor × *Lc.* Pirate King	D. & B. Littman
Dal's Way	*C.* Toowong × *Lc.* Coraki	D. & B. Littman
Debut	*Lc.* Pacific Sun × *L. anceps*	Fordyce
Ella Kimball	*Lc.* Santee × *C. loddigesii*	J. Walters
Gene Barber	*C. forbesii* × *Lc.* Leafwood Lane	M. Ragan
Janet Ragan	*Lc.* Chicanery × *C. violacea*	M. Ragan
Maria Aparecida Barani	*Lc.* Culminant × *C.* Rubens Ribeiro	S. Barani
Preface	*Lc.* Hawaiian Fantasy × *L. anceps*	Fordyce
Rose Mary Toon	*Lc.* South Esk × *Lc.* Bira	Coastal Gdns. (Rivermont)
Struber Farbenspiel	*Lc.* Gold Digger × *C. aclandiae*	Cramer
LYCASTE		
Hardie	Koolena × Promises	H. Pugh (O/U)
MASDEVALLIA		
Alma's Golden Triangle	Steven Male × Xanthina-Veitchiana	Flowers/Sea (Peninsula)
Colossal Chap	Chaparana × *colossus*	R. F. Hamilton
Dainty Miss	Angelita × *schroederiana*	M. Light
Marmalade	*barlaeana* × *strobelii*	W. Crawford (Mountain)
Speckles	*davisii* × *stenorhynchos*	R. F. Hamilton
MILTASSIA		
Akuma	*Mtssa.* Vino × *Milt. clowesii*	H. Rohrl
MILTONIA		
Allen Ruth	Lycaena × Bremen	Hoodview
Clive Halls	*vexillaria* × James Iver Mattson	E. Manson (C. Halls)
Richmond Beach	Bluntii × Golden Fleece	Baker & Chantry
MORRISONARA		
Betty Berthiaume	*Mtad.* Orange Sherbet × *Odm. bictoniense*	Beall
ODONTIODA		
Akai Benibana	*Oda.* Picasso × *Oda.* Lovely Bambi	Mukoyama
Clayton	*Oda.* Adelaide Alive × *Oda.* Sandal	Adelaide
Cristor Love	*Oda.* Lovely Morning × *Odm.* Cristor	Mukoyama
Esmond Love	*Oda.* Ispann × *Oda.* Lovely Morning	Mukoyama
Flintstone	*Oda.* Carl Keyes × *Odm.* Natterjack	Glen. O. Acres (Keith Andrew)
Florence Love	*Oda.* Florence Stirling × *Oda.* Lovely Morning	Mukoyama
Fremont Point	*Oda.* Bellozanne × *Oda.* Aviewood	E. Young O. F.
Galaxy	*Odm. rossii* × *Oda.* Star Trek	Glen. O. Acres (Keith Andrew)
Golden Alouette	*Oda.* Aloette × *Oda.* Pacific Gold	Charlesworth Div. McBean's
Le Couperon	*Oda.* Joe's Drum × *Odm.* Pescalo	E. Young O. F.
Lilac Lace	*Oda.* Lynx × *Oda.* Flintstone	Glen. O. Acres (Keith Andrew)
Momoe's Fantasy	*Oda.* Lovely Momoe × *Oda.* Lovely Bell	Mukoyama
Morning Bell	*Oda.* Lovely Morning × *Oda.* Lovely Bell	Mukoyama
Palace Tower	*Odm. uro-skinneri* × *Oda.* Harry Baldwin	Glen. O. Acres (Keith Andrew)
Paringa	*Oda.* Lincade × *Odm. crispum*	Adelaide

NAME	PARENTAGE	REGISTERED BY
ODONTIODA continued		
Penguin March	*Oda.* Lovely Morning × *Oda.* Lovely Penguin	Mukoyama
Quennevais	*Oda.* Eric Young × *Oda.* Samares	E. Young O. F.
Sally's Magic	*Oda.* Lovely Morning × *Oda.* Lovely Sally	Mukoyama
Vicard Point	*Oda.* Aviewood × *Oda.* Grosnez Castle	E. Young O. F.
Waikiki Keith	*Oda.* Lynx × *Oda.* Arlington	Glen. O. Acres (Keith Andrew)
ODONTOGLOSSUM		
Diamond Palace	Elise × Natterjack	Glen. O. Acres (Keith Andrew)
Luna Titan	Jackie Gleason × Grand Tetons	Beall
ODONTONIA		
Banderilla	*Odm. reichenheimii* × *Milt. schroederiana*	H. Rohrl
ONCIDIUM		
Maria Lehr	Yellow Imp × Sultan's Delight	G. Lehr (Taylor Orch.)
Memoria Bill Carter	Mendenhall × *papilio*	Carter & Holmes
Newberry Delight	Newberry Doll × Sniffen	Carter & Holmes
Sultan's Delight	Fall Delight × Sultamyre	Rod McLellan Co.
Suprata	Singh Gold × Taka	Sirianukarnwatthana
Waylon Almas	Janet Ragan × *varicosum*	M. Ragan
PAPHIOPEDILUM		
Andamooka	Enchantress × Bird-O'Paradise	Adelaide
Bengal Captain	Bengal Lancers × *glaucophyllum*	Baker & Chantry (O/U)
Bordeaux de Valec	Batelier × Black Rook	Vach. & Lec.
Carpe Diem	Questover × Wendover	A. Svoboda
Charles Lindbergh	Petula × *rothschildianum*	A. Mochizuki
Charlie Sekayouma	Hortense × Gowerianum	Hoodview
Cherry Wine	Ernest Read × *charlesworthii*	A. Mochizuki
Chloe Love	Questover × Winston Churchill	A. Svobada
Composible	Compton × Winston Churchill	Mukoyama
Comradeship Sioux	Red Compton × Sioux	Mukoyama
Coral Song	Love Song × *ciliolare*	A. Mochizuki
Crazy Island	Crazy Horse × Island Song	Mukoyama
Doctor Strath	Strathgreen × Memoria Doctor Tsuchiya	Mukoyama
Dragon Frieze	Oriental Frieze × Auroreum	A. Mochizuki
Dragon Mystic	Auroreum × Mystic Jewel	A. Mochizuki
Dragon Salsa	Marlborough × Bournette	Dragonstone
Dragon Spot	Small World × Letozia	Dragonstone (O/U)
Dragontario	Dragon Wine × Dot McNay	Dragonstone (Norman's Orchids)
Early Spring	Ernest Read × Yachiyo Spring	A. Mochizuki
Enzan Penny	Overraeus × Kay Penny	Mukoyama
Enzan White Night	True Spirit × F. C. Puddle	Mukoyama
Fair Lady	Via Quatal × *fairrieanum*	Paphanatics
Fancy Master	Gowdon × *mastersianum*	A. Mochizuki
Flying High	Utgard × *haynaldianum*	A. Mochizuki
Free Spirit	Madame Martinet × Virgo	Orchid Zone (T. Root)
Gerd Röllke	*rothschildianum* × *emersonii*	E. Potent (O/U)
Gina Short	Pinocchio × *delenatii*	G. Short (O/U)
Ginga	Love Song × Kowloon	A. Mochizuki
Glenwood Goddess	Divisadero × Santa Margarita	Glen. O. Acres (O/U)
Grandage	Vedanta × Saint Swithin	A. Mochizuki
Grands Vaux	Grosnez Castle × Saint Ouen	E. Young O. F.
Green Linnet	Liz Greenlees × F. C. Puddle	Mukoyama
Hanes Ocean	Blendia × Indian Ocean	O. Viengkhou (Hanes Orchids)
Harold Koopowitz	*malipoense* × *rothschildianum*	Paphanatics
Hautlieu	Dusty Miller × Gaymaid	E. Young O. F.
Hidden Surprise	Chiara × Makmaster	Paphanatics
Irish Eyes	Scarborough Faire × Memoria Toshio Miyata	Orchid Zone (T. Root)
Javier Perez	Fitchianum × Makuli	J. Perez (Baker & Chantry)
Jean Herbert	Via Avila Beach × Hellas	Ezi-Gro (Orchid House)
Johnston's Red	Valwin × Botan	Johnston Orchids (O/U)
Kamikane Forest	Lovely Present × Jolly Meadows	Mukoyama
Kamikane Green Gem	Hamana Windy × Jolly Green Gem	Mukoyama
Kamikane Paradise	Jolly Meadows × Olympian Paradise	Mukoyama
Kiwi Princess	Via Pantano × Erma Shulda	D. Bella (Rod McLellan Co.)
La Ville Abbe	Rod McLellan × Greenstede	E. Young O. F.
Leon Theremin	Lambert Day × *hirsutissimum*	A. Mochizuki
Les Chenes	*delenatii* × Charles Sladden	E. Young O. F.
Les Niemes	Rubicelle × Green Gold	E. Young O. F.
L'Etacq	*rothschildianum* × Masupi	E. Young O. F.
Lovely Acres	Lovely Yard × Golden Acres	Mukoyama

NAME	PARENTAGE	REGISTERED BY
PAPHIOPEDILUM continued		
Lovely Landing	Golden Acres × Lovely Land	Mukoyama
Lyrup	*tonsum* × Pop Monkhouse	Adelaide
Magic Callos	Voodoo Magic × *callosum*	A. Mochizuki
Magic Frieze	Oriental Frieze × *hookerae*	A. Mochizuki
Magic Gem	Emerald × Voodoo Magic	Paphanatics
Marlyse Bustillo	Deena Nicol × *primulinum*	Paphanatics
Memoria John Ellis	Red Knight × Holdenii	S. Taylor (Ratcliffe)
Miyabi Kou	Bell Ringer × Charjan	N. Izumi (O/U)
Miyabi Nobu	Bit-O'-Sunshine × Andy Yamamoto	N. Izumi (O/U)
Miyabi Ukifune	Andy Yamamoto × Miyabi Kou	N. Izumi
Miyabi Zen	Miyabi Nobu × Kay Rinaman	N. Izumi
Mylor	Pop Monkhouse × Myth	Adelaide
Overlooking Den	Denehurst × Overraeus	Mukoyama
Overlooking Meadows	Overraeus × Jolly Meadows	Mukoyama
Overlooking Tonkin	Overraeus × Jack Tonkin	Mukoyama
Pacific Stone	Pacific Beauty × Winston Churchill	Mukoyama
Paon de Valec	Paeony × *rothschildianum*	Vach. & Lec.
Pearl Song	Love Song × *virens*	A. Mochizuki
Penfield	Copperware × *tonsum*	Adelaide
Pixie Song	Love Song × *delenatii*	A. Mochizuki
Port Elliot	*tonsum* × Onyx	Adelaide
Red Compton	Radley × Compton	Mukoyama
Robe	Commando × Sparsholt	Adelaide
Robert's Reward	Raisin Jack × Memoria Robert Ward	Paphanatics
Santa Monica	Golden Acres × *mastersianum*	A. Mochizuki
Seymour Tower	Beresford × Beaumont	E. Young O. F.
Simon Sioux	Simonburn × Original Sioux	Mukoyama
Sing a Song	Love Song × Singapore	A. Mochizuki
Sioux's Arrow	Betsy Raper × Original Sioux	Mukoyama
Sitting Tsuchiya	Sitting Bull × Memoria Doctor Tsuchiya	Mukoyama
Snow Crystal	F. C. Puddle × Yerba Buena	A. Mochizuki
Spotmaker	Chans Temple × Duncan York	O. Viengkhou (O/U)
Summer Master	Summer Boy × *mastersianum*	A. Mochizuki
Telementrow	Telement × Hamana Winrow	Mukoyama
Tequila	Starry Sky × Nettie McNay	A. Mochizuki
Wings World	Wings of Song × Small World	Mukoyama
Winning Sioux	Hamana Winrow × Original Sioux	Mukoyama
Wizard's White	California Gold × Skip Bartlett	Orchid Zone (T. Root)
World Peace	Beatrice Ernst × Ceaser Pitta	Adelaide
Yearly Festival	Yerba Buena × Memoria Doctor Tsuchiya	Mukoyama
Yoshi River	World Artist × Winston Churchill	Y. Yoshikawa (O/U)
PHALAENOPSIS		
Alette Short	Lupe Ibarra × Agnes Rathbone	G. Short (Paradise [SA])
Bluequill Treasure	Ida Fukumura × Ewing's Treasure	W. Bohne
Brother Excelsior	Brother Fancy × Brother Brungor	Brother
Brother Little Amaglad	Leyte Stuart × Ho's Amaglad	Brother
Brother Pico Snow	Petite Pink × *amabilis*	Brother
Brother Polar	Brother Imp × Misty Green	Brother
Brother Wonder	Brother Buddha × Leyte Stuart	Brother
Clay Hill	Pine Hill × *sumatrana*	M. Ragan
Dachlmoos	Polarlicht × Milva	Cramer
Edward Kitchen	Bertie De Martini × Edie Wasserman	William P. Smith
Fallingwater	Anasazi × Aubrac	J. Soe Nyun
First Leyte	First Choice × Leyte Stuart	Brother
Frisson Mac	*maculata* × Frisson	Cramer
Gotzenalm	Southern Charmer × *maculata*	Cramer
Ho's Ambolime	Ho's Flecked Lime × *amboinensis*	Tin-Fan Ho
Ho's Bright Star	Star of Florida × Deventeriana	Tin-Fan Ho
Ho's Dreamy Jade	Su-An Cricket × Yungho Gelb Canary	Tin-Fan Ho (O/U)
Ho's Michogeorge	*micholitzii* × George Vasquez	Tin-Fan Ho
Indiana Sunset	Malibu Heir × *amboinensis*	Stones River
Island Chief	Coral Isles × Cherokee Chief	W. Losert
Joan Sutherland	William Sander × Double Rose	B. Woodson
Kaiser's Delight	Bavarian Delight × Bavarian Lady	W. H. Kaiser
Leyte Pink	Leyte Gulf × Poco Pink	Brother (O/U)
Leyte Stuart	Leyte Gulf × *stuartiana*	Brother (O/U)
Liu's Rainbow	Be Glad × *lindenii*	Liu Hwa-Tung
Liu's Spring Smile	Springtime Pink × Carmela's Pixie	Liu Hwa-Tung
Live Wire	Heartland × Wild One	Orchid Zone (H. Hager)
Malibu Buccaneer	Sleeping Giant × *sanderiana*	Zuma Canyon
Malibu Chipper	Rainbow Chip × *equestris*	Zuma Canyon

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Malibu Gala	Rachel Marie × Baile de Gala	Zuma Canyon
Malibu Meadow	Hakalau Ruler × Baile de Gala	Zuma Canyon
Malibu Pixie	Little Mary × *equestris*	Zuma Canyon
Malibu Pride	Poco's Rosado × Gallant Beau	Zuma Canyon
Malibu Princess	Poco's Gal × Prince Takamado	Zuma Canyon
Malibu Talisman	Poco's Rascal × *stuartiana*	Zuma Canyon
Malibu Thrill	Hisa Lady Rose × Zauberrot	Zuma Canyon
Malibu Tide	Navarre Rose × Kathleen Ai	Zuma Canyon
Malibu Tiger	Prince Puck × Neon Stripes	Zuma Canyon
Malibu Tinker	Zuma Encore × *equestris*	Zuma Canyon
Malibu Wish	Small Wish × Via Malibu	Zuma Canyon
Memoria Calvin Woodard	California Glow × Pink Festival	Mid-Pacific (R. Tajima)
Memoria Uncle Mac	Dot Darce × Vera Henderson	M. Ragan
Miva Poeme	Cataracte × Mivacap	Michel Vacherot
Newberry Bouquet	Grand Cascade × Fairy Tales	Carter & Holmes
Orchid Haven Pride	Zuma Topaz × Miguel	M. Birkett
Pearl Jam	Hawaiian Superstar × Hawaiian Jamboree	Mid-Pacific (R. Tajima)
Pearly Moon	Hawaiian Jamboree × Queen Irene	Mid-Pacific (R. Tajima)
Penang Chief	Penang × Cherokee Chief	W. Losert
Petite Pink	Petite Snow × Poco Pink	Brother (O/U)
Pisgah Attraction	Alice Sharpe × Micha's Child	Owens Orchids
Pisgah Dew	Green Mist × Eleanor Yates	Owens Orchids
Pisgah Exquisite	Carmela's Dream × Snow Line	Owens Orchids
Pisgah Goddess	Pacific Prelude × Royal Kathleen	Owens Orchids
Plantation's Plum Tart	Plantation Plum × Ida Fukumura	Orchid Plantation
Polarlicht	Spitzberg × Kathleen Ai	Cramer
Porcelain Pleasure	Butterfly Waltz × Peace Center	Carter & Holmes
Princess Ida	Ida Fukumura × Princess Kaiulani	Mid-Pacific (R. Tajima)
Queen Gaster	Hwafeng Queen × Taisuco Gaster	W. H. Chen (Chao-Tsai Chen)
Ruby Lace	Ida Fukumura × Hausermann's Charity	W. Losert (Hausermann)
Rusk's Mountain Meadow	Sweet Memory × Poco's Rascal	Zuma Canyon (J. Rusk)
Stanwell Milaan	Stanwell Joseph × Mariposang Puti	J. Latten
Stone Always	Stone House × Coral Isles	Chen Gee-En
Stone Angel	Stone House × Paiho Ruby	Chen Gee-En
Stone Cavort	Deventeriana × Prima	Chen Gee-En
Stone Child	Prima × *mariae*	Chen Gee-En
Struber Charm	Cellinde × *violacea*	Cramer
Struber Gstanzl	Milva × Stadt Trier	Cramer
Struber Welt	Polarlicht × Stadt Trier	Cramer
Sunny Green Ballet	Gelblieber × Deventeriana	Kuo-Yuan Lin
Sunny Green Jade	Gelblieber × *amabilis*	Kuo-Yuan Lin
Sweet Grass Spring	Spring Creek × Jade	W. Bohne
Taisuco Kaalagance	Mount Kaala × Asian Elegance	W. H. Chen
Taisuco Kaalarot	Mount Kaala × Taisuco Hatarot	W. H. Chen
Taisuco Moongance	Kaala Moon × Asian Elegance	W. H. Chen
Taisuco Moonlit	Taisuco Moon × Hawaiian Clouds	W. H. Chen
Taisuco Pearl	Taisuco Kochdian × Asian Elegance	W. H. Chen
Taisuco Wintris	Taisuco Windian × *equestris*	W. H. Chen
Wildrose Frost	Live Wire × Rose Beauty	Orchid Zone (H. Hager)
Zuma Innocence	Susan Harry × Roseval	Zuma Canyon
PHRAGMIPEDIUM		
Living Fire	Sorcerer's Apprentice × *besseae*	Orchid Zone (M. Pendleton)
POLYSTACHYA		
Darling Star	*ottoniana* × *virginea* †	Duckitt
Oudepost	*cultriformis* † × *virginea*	Duckitt
POTINARA		
Angelo Hofileña	*Pot.* Honolulu Jewel × *Blc.* Helen's Fortune	C. A. Escobar (J. Escobar)
Fordyce Prelude	*Slc.* California Apricot × *Blc.* Horizon Flight	Fordyce
SARCOMOANTHUS		
Little Sparkle	*Sarco. falcatus* × *Dry. adversus*	L. Dougherty
SOPHROLAELIOCATTLEYA		
Aloha Elizabeth Louise	*Sl.* Isabelle Stone × *Slc.* Gypsy Rose	B. Gerhard (J. Woltmon)
Lady Lardner	*Slc.* Rajah's Ruby × *Sc.* Batemanniana	Fordyce
Memoria Matthew Wise	*C.* Hidden Gold × *Slc.* Golden Wax	J. Walters
Struber Feuerwerk	*Slc.* Coastal Magic × *Slc.* Wendy's Valentine	Cramer
Struber Magic	*Lc.* Gold Digger × *Slc.* Coastal Magic	Cramer

NAME	PARENTAGE	REGISTERED BY
SPATHOGLOTTIS		
Burleigh Gold	*affinis* × *kimballiana* †	Ted Green (Burleigh Park)
VASCOSTYLIS		
Royal Friendships	*Ascda.* Fuchs Port Royal × *Vasco.* Five Friendships	Brighton Nursery
VUYLSTEKEARA		
Cape Alava	*Vuyl.* Soleduck Falls × *Odm.* Jackie Gleason	Beall
WILSONARA		
Burnt Falls	*Odcdm.* Tiger Butter × *Oda.* Lautrix	Beall
Golden Growler	*Oda.* Shelley × *Odcdm.* Tiger Hambühren	Mukoyama (Geyserland)
Goolwa	*Wils.* Salgrin × *Oda.* Adelaide Alive	Adelaide
Kangarilla	*Wils.* Salgrin × *Oda.* Saint Mary's Peak	Adelaide
Puget Sound	*Oda.* National Pride × *Wils.* Burnt Falls	Beall
ZYGOPETALUM		
Doctor Ben	Artemis × Artur Elle	J. & S. Magray (Dr B. C. Berliner)
ZYGOWARREA		
MacWarry	*Z. mackayi* × *Wra. warreana*	Old Mill (J. E. M.)

*New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Herscheliodisa = *Disa* Bergius × *Herschelia* Lindley

‡Natural genus new to registration:
Herschelia Lindley

†Species appearing for the first time as parents in registration:
Bulbophyllum corolliferum; Coryanthes alborosea; Coryanthes macrantha; Disa longicornu; Herschelia lugens; Polystachya cultriformis; Polystachya virginea; Spathoglottis kimballiana

CORRIGENDA – Orchid Review list of:
September/October 1994, *Cym.* Rio Sambo: delete (= *Cym.* Eastern Wind)
November/December 1995, *Phal.* Sakura Komachi: change originator to (Takaki O.N.)
January/February 1996, *Lyc.* Doug Kennedy: add † after *ciliata*
January/February 1996, † Species appearing . . .: add *Lycaste ciliata*

CORRIGENDUM – Sander's List of Orchid Hybrids 1986–1990
p.346 *Lc.* Sakurgari: should read Sakuragari

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Reprinted from "Orchid Review", U.K.

Notes on the Orchids of New Guinea and the Pacific

Part 1

by Paul Ormerod

ABSTRACT

Literature and herbarium studies into the orchids of New Guinea and the Pacific has revealed a variety of new and noteworthy data. The distribution and synonymies of several taxa are enlarged, also some nomenclatural problems are discussed. Four new combinations are proposed: *Anoectochilus subregularis, Dendrobium* Sect. *Tegrodon, Goodyera novembralis* and *Thrixspermum williamsianum*. Five new species are proposed: *Cleisostoma platystele, C. stimulatrix, Glomera distichifolia, Goodyera crocodiliceps* and *G. inmeghema*.

The orchids of New Guinea undoubtedly have contributed much to the orchidaceous elements of the Pacific flora. One needs to constantly compare the plants of each region and this had lead me to write this article which covers various taxa of both areas.

One problem that arises from dealing with plants that are closely related from adjacent regions is the delimitation of a species. A plant colonises an area far from its interbreeding range and thus the new population may over time gradually accentuate differences from generation to generation of varying significance from the original one. Later migrations from the original population may never again find the opportunity to take place.

I have in some cases preferred to give species status to various taxa that some authors may prefer to give a subspecific status (e.g. *Hapalochilus (=Bulbophyllum) stenophyton* vs. *neoebudicus; Robiquetia mooreana* vs. *R. woodfordii; Vrydagzynea argyrotaenia* vs *V. guppyi).*

The following abbreviations have been used: distribution to distr., microfiche to mf., occurrence to occ., photocopy to ph. and synonym to syn.

Anoectochilus Blume

This genus is one of the pretty-leaved "jewel orchids". The leaves are often reddish with silvery to gold-coloured reticulate veins, making the plants difficult to spot among leaf-litter. The species discussed below has been placed in *Goodyera* due to its simple labellum (which however lacks internal setae). But its column structure (including the possession of two remote stigmas) is entirely that of *Anoectochilus*, where Schlechter (1906) correctly suspected it to belong.

Anoectochilus subregularis
(Rchb.f.) Ormd., comb. nov.

Basionym: Georchis subregularis Rchb.f., Linnaea 41:61, 1877. Syn.: *Goodyera subregularis* (Rchb.f.) Schltr., Engl. Bot. Jahrb. 39:58, 1906; *Eucosia subregularis* (Rchb.f.) Schltr., Engl. Bot. Jahrb. 45:394, 1911.

Type: New Caledonia. Kanala, 1855-60, Vieillard 1312 (holo: P n.v.).

Distribution: New Caledonia and Vanuatu.

Occurrence: New Caledonia. Yaouhe, 400m, 24-09-1902, Schlechter 14792 (K; P, WRSL n.v.).

Vanuatu. South Malekula, 800m, 11-10-1979, Lewis & McDonagh 79 (K). Aneityum, Mt. Irero, 21-07-1971, Green RSNH 1166 (K); peak between Anumey and Ithug, 700m, 26-06-1896, Morrison s.n. (K). Erromanga, Cooks Bay, 22-07-1896, Morrison s.n. (AMES n.v. [photo K], K no fls.). Efate, 20-08-1896, Morrison s.n. (K).

Notes: Some of the collections cited under the synonym *Goodyera subregularis* by Lewis & Cribb (1989) belong to the species described below as *Goodyera inmeghema*. Lewis & Cribb also treat the Morrison collections at Kew as being numbered. The numbers they cite are in fact loan numbers written in pencil inside an ink stamp on the sheet. I have therefore recorded Morrison collections as being unnumbered.

Cleisostoma Blume

Species of this genus are occasionally cultivated but their smallish flowers generally attract little horticultural interest. There are approximately seven species in New Guinea and the Pacific, with perhaps one or two undescribed taxa in New Guinea and New Caledonia. Besides those discussed below, the known entities are *C. bicorne* (J.J.Sm.) Garay [Syn.: *Sarcanthus decurvicalcar* J.J.Sm.], *C. gjellerupii* (J.J.Sm.) Garay [Syn.: *Sarcanthus paludosus* van Royen], *C. litoreum* (Schltr.) Garay and *C. pacificum* Lewis & Cribb [Syn.: *C. longipaniculatum* Kores]. *Cleisostoma micholitzii* Krzl., Osterr. Bot. Zeit. 44:462, 1894.

Type: Duke of York Island Group. Mioko Island, 10-1893, Micholitz s.n. (holo: B — destroyed).

Syn.: *Carteretia paniculata* A.Rich., in Sert. Astrol. Atlas:T.4, 1833; Sert. Astrol.:10, 1834; *Saccolabium paniculatum* (A.Rich.) Schltr., in Schum. & Laut., Fl. Deutsch. Suds.:228, 1905 nom. illeg. non Wight 1851.

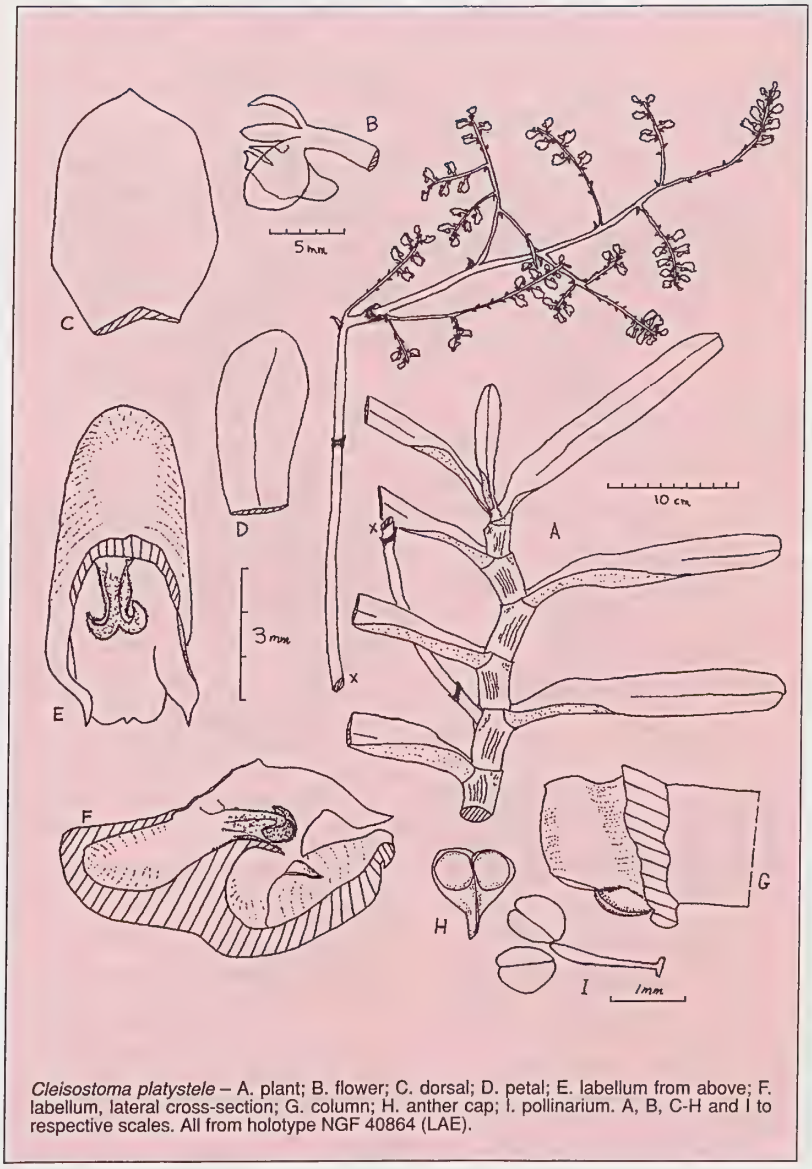
Type: New Ireland. Port Carteret, Lesson s.n. (holo: P n.v.). *Saccolabium quinquefidum* Lindl., in W.J.Hook., Lond. J. Bot. 2:238, 1843 nom. illeg.; *Gastrochilus quinquefidus* (Lindl.) Kze., Rev. Gen. 2:661, 1891; *Sarcanthus quinquefidus* (Lindl.) Schltr., Fedde Rep., Beih. 1:990, 1913; *Cleisostoma quinquefidum* (Lindl.) Garay, Bot. Mus. Leafl. Harv. Uni. 23, 4:172, 1972.

Type: New Guinea [prob. New Ireland], Hinds s.n. (holo: K-L).*Sarcanthus robustus* Schltr., Fedde Rep., Beih. 1:991, 1913 non O'Brien 1914; *Cleisostoma schlechteri* Garay, Bot. Mus. Leafl. Harv. Uni. 23, 4:174, 1972.

Type: New Guinea. Kaulo Base, 350m, 04-1908, Schlechter 17517 (holo: B — destroyed; iso: L n.v.).

Distribution: Papua New Guinea and the Bismarck Archipelago (to New Hanover).

Notes: This species is usually called *C. quinquefidum*, but the latter name is illegitimate (ICBN 1988 Art. 63.1) because when Lindley described its basionym *Saccolabium quinquefidum* he had *Carteretia paniculata* in synonymy. His failure to utilise the earlier epithet *"paniculata"* which was at the time unused in *Saccolabium* compels me to adopt the next available and valid name viz *Cleisostoma micholitzii*. I have followed O'byrne (1994) in listing *Cleisostoma schlechteri* in synonymy, though the mainland plants



Cleisostoma platystele – A. plant; B. flower; C. dorsal; D. petal; E. labellum from above; F. labellum, lateral cross-section; G. column; H. anther cap; I. pollinarium. A, B, C-H and I to respective scales. All from holotype NGF 40864 (LAE).

differ from the island ones in a new minor details such as size and scape length.

Cleisostoma platystele
Ormd., sp. nov.

Type: Papua New Guinea. Morobe Prov., Zenag, 1370m, 11-05-1969, Millar NGF 40864 (holo: LAE).

Species nova affine *C. litoreum* sed habitu robustior et inflorescenti paniculato.

Epiphytic, climbing orchid. Roots 4mm thick. Stem slightly fractiflex, slightly compressed, elliptic to circular in x-section, internodes 1.2-4cm long x 1-1.2cm thick. Leaf sheaths covering stem, rugulose in dry material. Leaves ligulate, ± equally obtusely bilobed, thickly coriaceous 13-20cm long or more x 2-3cm broad. Inflorescence stout, 0.4-0.6cm thick at base, 37-72.5cm long (peduncle 27-33cm long; panicle 10-39.5cm long), panicle branches 4-15cm long, a few flowers open at a time per branch. Flowers greenish to greenish-brown, labellum white, all turning yellow with age. Sepals elliptic, subacute, fleshy, 5mm long x 4mm broad. Petals oblong-obcuneate, obtuse, fleshy, 4mm long x 2mm broad. Labellum three-lobed, fleshy, 7mm long x 3mm broad; lateral lobes broad based, upper half ligulate, acute; midlobe ± quadrate, emarginate, apiculate, 2.5mm long x 2mm broad, a small deltoid tooth inside each side at base; spur obliquely truncated, obtuse, 3.5mm long; frontwall callus triangular uncinate in x-section, minutely papillose on back; backwall callus bifurcate, minutely papillose. Column short, stout, 2mm long x 3mm broad; rostellum very short, bidentate; stigma a narrow slit; anther cap cordate, rostrum ridged, 2mm long; pollinia four, in two pairs; stipes linear-subspathulate; viscidium small.

Distribution: Papua New Guinea.

Occurrence: Morobe Prov., Menyama, 1370m, 18-05-1965, Millar NGF 22537 (LAE).

Notes: The flowers of this species are quite like those *C. bicorne* and *C. litoreum* in structure, however the latter two are much smaller plants with usually unbranched inflorescences. In habit *C. platystele* is intermediate between *C. litoreum* and *C. micholitzii*.

I believe the present taxon is represented among Mr. Howcroft's personal collection of drawings. Perhaps he will at some stage offer some further observations based on his experience with the living plant.

Cleisostoma stimulatrix Ormd., sp. nov.

Type: Papua New Guinea. Morobe Prov., Wau Subd., Kulolo Ck. logging area, 1160m 6-07-1967, Millar NGF 22917 (holo: LAE; iso: BRI; CANB, K, L n.v.).

Species nova valde distinctio flora Papuasiae in calcar labelli longe cornuformis.

Epiphytic, long climbing orchid. Stems rooting at many points, slightly fractiflex, somewhat compressed, elliptic in x-section, internodes 1.5-2cm long x 0.7-0.9cm thick. Leaf sheaths covering stem, subrugulose in dry material. Leaves ligulate, inequally obtusely bilobed, coriaceous, at least 15.5cm long or more x 2.3-3cm broad. Inflorescence stout, 0.4-0.6cm thick at base, 37-40cm long (peduncle 8-17cm long; panicle 10-32cm long), panicle branches 1-11cm long, a few flowers open at a time per panicle branch. Floral bracts deltoid, 1-1.5mm long. Pedicellate ovary subclavate, 5mm long. Flowers "white, sepals and petals with bright purple, mentum white". Dorsal sepal elliptic-cymbiform, scattered verrucose (artifact ?), obtuse, 5mm long x 2.5mm broad. Lateral sepals ovate-elliptic, subacute, 5mm long x 2.5mm broad. Petals oblong-elliptic, subacute, 4mm long x 2mm broad. Labellum three-loved, 4mm long to midlobe tip, 6mm long to spur tip; lateral lobes quadrate, erect, ca. 2mm long and broad; midlobe cornuform, the upfolded margins giving this appearance, ca. 2mm long; spur cornuform, obtuse, 4mm long x 1mm diam.; front and backwall calli bilabiate, minutely papillose. Column short, stout, 1.5mm long x 2mm broad; rostellum ligulate.

Distribution: Papua New Guinea.

Occurrence: Morobe Prov., Lae to Wau Rd., Watut Rv. near SumSum, 610m, 15-08-1962, Millar & Womersley NGF 14621 (LAE).

Notes: The prominent horn-shaped floral spur of this species readily distinguishes it from all Papuasian taxa of *Cleisostoma*. In some ways the floral structure is much like that of *Sarcoglyphis potamophila* (Schltr.) Garay & Kittr. from Borneo.

Cleisostoma inflatum (Rolfe) Garay from Borneo and Vietnam also has a similar floral structure, but is a much smaller plant with the flowers having obtuse lateral lobes and a somewhat more complicated column shape. I believe good material will be needed to assess the pollinarium and thus determine the relationship of *C. stimulatrix*.

***Cynorkis* Thouars.**

The centre of speciation for *Cynorkis* is in Madagascar and adjacent island groups, with a second area of diversity in Africa. The plant in Fiji and the Horne Islands appears to have been accidentally introduced earlier this century and is now well established. The same taxon also successfully seeds itself in greenhouses both here and in Europe. *Cynorkis fastigiata* is the aforementioned species and lectotype of the genus (Kores 1989). Introduced below is the name *C. obcordata*, which appears to be the oldest and therefore correct name for the entity generally known as *C. fastigiata*.

Cynorkis obcordata (Willem.) Schltr., Beih. Bot. Centralbl. 33, 2:401, 1915. Basionym: *Orchis obcordata* Willem., in Usteri, Ann. Bot. 18:52, 1796 non D.Don 1825.

Type: Mauritius. Willemet s.n. (holo: lost).

Syn.: *Cynorkis fastigiata* Thouars, Hist. Orch.: T.13, 1822 as *Cynorchis f.; Cynorkis isocynis* Thouars, Hist. Orch.: T.13, 1822 nom. alt. as *Cynorchis i.*

Types: Madagascar, Reunion and Mauritius. Thouars s.n. (syn.: P ? n.v.).

Distribution: Madagascar to Seychelles; Fiji and Horne Islands.

Occurrence: Fiji. sine loc., Messmer s.n. (NSW); NE of Korotoga, 4-04-1993, K.D.Hill 4401 (NSW).

Notes: Kores (1989) had 46 collections of this species available from Fiji, the above two cited are in addition to these. I have also studied living material courtesy Dr. Geoff Stocker of Malanda. It is testimony to the variability of *C. obcordata* that it appears to have at least 18 synonyms.

***Dendrobium* Swartz.**

This large genus has many horticulturally desirable groups in New Guinea and the Pacific. The notes below concern less well known species.



Cleisostoma stimulatrix – A. plant; B. flower; C. dorsal sepal; D. petal; E. column; F. backwall callus. A, B-E and F to respective scales. A from NGF 14621 (LAE); .B-F from holotype NGF 22917 (LAE).

Section *Latouria* (Bl.) Miq.

Cribb (1983) revised this section, but a new account is necessary since much interesting information (new species, synonymies etc.) has come to light in the mean time. Recently Cribb (1995) added *D. whistleri* to the section from the Solomon Islands and Samoa.

Dendrobium levatii Krzl., Bull. Soc. Bot. France 76:299, 1929.

Type: "Nouvelles-Hebrides" [=Vanuatu]. sine loc., Levat s.n. (holo: MPU n.v.).

Notes: This name was overlooked by Lewis & Cribb (1989) in their work on Vanuatu's orchids. However Kraenzlin's description of *D. levatii* strongly suggests that it is the same as the earlier *D. mooreanum* Lindl.

Section *Inobulbon* Schltr.

The status of this section has varied over the years, once it was treated as a genus and recently also as a subgenus (of *Dendrobium*). Only two species, *D. muricatum* Finet and the one commented on below belong here.

Dendrobium munificum (Finet) Schltr. ex Prain, Index Kew. Splly. 5:79, 1921; Schltr., Fedde Rep., Beih. 1:444, 1912 nom. nud. Isonym: Halle, Fl. Nouv.-Caled. 8:140, 1977. Basionym: *Dendrobium muricatum* Finet var. *munificum* Finet, Bull, Soc. Bot. France 50:378, T.14, f.7-18, 1903. Syn.: *Inobulbon*

munificum (Finet) Krzl., Pflanzenr. 45:319, 1910.

Type: New Caledonia. Conception, 700m, 7-01-1869, Balansa 781 (holo: P n.v.).

Distribution: New Caledonia.

Notes: Schlechter was the first to use the combination *D. munificum* but unfortunately gave no indication of a basionym. It was Prain who gave the citation of a basionym and attributed the transfer to Schlechter. So I believe the form "Schltr. ex Prain" to be correct. Halle's transfer is therefore superfluous.

Section *Tetrodon* (Krzl.) Ormd.

New Caledonia is the home to many unique species of *Dendrobium*, and the single species of section Tetrodon is no exception. It has the habit of certain taxa of section *Eleutheroglossum* Schltr., but differs from them in the flowers with a short mentum, linear-oblong tepals and an entire labellum midlobe with three prominent horn-like calli on it. Halle (1977) further notes that the roots of *D. oppositifolium* (Krzl.) Halle are minutely verruculose, the pseudobulbs dry an orange colour and that the inflorescence occasionally branches. In section *Eleutheroglossum* the roots are glabrous, the pseudobulbs dry a yellow colour and the inflorescence never branches.

Dendrobium* section *Tetrodon
(Krzl.) Ormd., comb. nov.

Basionym: *Eria* section *Tetrodon* Krzl., Viertelj. Naturf. Ges. Zurich 74:89, 1929.

Lectotype (here designated): *Eria oppositifolia* Krzl. = *Dendrobium oppositifolium* (Krzl.) Halle.

Notes: Kranzlin had two species in section *Tetrodon*, he wasn't sure of the correct generic position of the second one *Eria petrophila*. Therefore *Eria oppositifolia* is an appropriate sectional lectotype. Halle (1977) suspected that *Eria petrophila* was only a form of *Dendrobium oppositifolia*, the latter which he admirably illustrated.

***Dipodium* R.Br.**

Australia is recognised as the area of diversity for *Dipodium*, several new species have been proposed in recent years. The entity discussed below is common in New Caledonia and parts of Vanuatu. It has been treated as a variety of *D. punctatum* (J.E.Sm.) R.Br. which is nomenclaturally inadmissable.

Dipodium squamatum (G.Forst.) J.E.Sm., in Rees' Cyclop. 39, 2: *Dipodium* no.2, 1819. Basionym: *Ophrys squamata* G.Forst., Fl. ins. austr. :59, 1786. Syn.: *Cymbidium squamatum* (G.Forst.) Sw., in Vet. Acad. Handl. Stockh. 21:238, 1800. *Dipodium punctatum* (J.E.Sm.) R.Br. var. *squamatum* (G.Forst.) Finet ex Guill., Not. Syst. 10, 2:68, 1941.

Type: New Caledonia. Forster 173 (lecto: K n.v.; iso: P n.v.; icon BM).

Distribution: New Caledonia and Vanuatu.

Notes: Robert Brown (Prodr.:331, 1810) only mentioned *Ophrys squamata* as being a species of *Dipodium*, he did not transfer it. It was J.E. Smith who made the transfer as pointed out by Mabberley (Taxon 32, 1:82, 1983). Lewis & Cribb (1989) give a full synonymy for *D. squamatum*.

***Erythrodes* Blume.**

This genus is urgently in need of a taxonomic revision in the S.E. Asiatic part of its range. Two or three species occur in the Pacific.

Erythrodes parvula Kores, Allertonia 5, 1:30, 1989.

Type: Fiji. Viti Levu, near Ndakuivuna, 20-04-1953, Smith 7165 (holo: US n.v.; iso: AMES, BISH n.v.; K).

Syn.: *Erythrodes bicarinata* auct. non Schltr.: Lewis & Cribb 1989:25.

Distribution: Vanuatu; Fiji; Tonga and Samoa (?).

Occurrence: The material from Vanuatu agrees perfectly with material from Fiji and is a new record. Cribb & Whistler (in press) have referred Samoan specimens named *E. parvula* to *E. purpurascens* Schltr., the latter originally described from New Guinean plants.

Part 2 will appear in the October 1996 "AOR".

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***Cym.* One Tree Hill 'Johns Quest' SM/CSA x *Cym.* Sleeping Dawn 'Geyser Gold' 4N** - excellent pure colour yellows

***Cym.* Radiant Harry 'Lipper' x *Cym.* Vogelsang 'Eastbourne'** - a fabulous remake of Richard Tauber, sure winners

ROYALE ORCHIDS

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AOR 132



Cymbidiums Australia



Presented by the Australian Cymbidium Society Inc

Editor's Report

Happy Birthday

There's an old Greek proverb which says, "The mailman brings a lot of bills on the first day of the month". Thankfully he also brings the Australian Orchid Review at about the same time, every second month, unless of course you live in Adelaide, South Australia, which unfortunately the "postie" seems to associate with being a suburb of the South Pole.

From the seeds of suggestion sown in a Graphic World backroom on the 28th April 1995, Cymbidiums Australia has grown to become an integral part of this world renowned Orchid Journal. Unlike the dreaded arrival of those bills, A.O.R. readers look forward to receiving it, and each day past its expected arrival date brings loud groans and mumblings of despair.

This issue heralds the 1st Birthday of Cymbidiums Australia. As Editor, may I say just how much pleasure and satisfaction the past 12 months involvement with its production has given me. Some of the articles for future publication will just blow you away. After the initial settling in period, we can now look forward to what undoubtedly will be the best cymbidium content published in any Orchid Journal, anywhere in the world.

For most of us the reality of seeing a Santa Barbara Orchid Show is just a dream. Fortunately, this year we are able to review the 51st Annual Santa Barbara Orchid Show via the pen of Peter Rochfort and catch a glimpse of this grandiose event through the photography of Peter's wife Karen. A lecturer at the 1996 Annual Cymbidium Congress of the Cymbidium Society of America, Peter was able to make a number of visits to nurseries of interest during his trip to America and we can look forward to articles about these as well as a number of interviews in the future.

Other features in this issue include a look at *Cym.* Pendragon 'Broadmoor' — purely from a South Australian perspective. Murray Weston, current Registrar of Judges of the Cymbidium Club of South Australia brings us this interesting stud profile, one which I am sure will be expanded upon in the not too distant future.

Clive Halls discusses the importance of correct benching of plants and its effect on how well we grow and flower our cymbidiums. While Brian Noble briefs us on the "noble art" (sorry about the pun Brian) of safely transporting our plants to the inaugural Australian Cymbidium Show at Ararat.

Finally we take a look at the place where all cymbidium enthusiasts will be on the 7th and 8th September 1996, "Ararat The Orchid City" — and David Clark the man responsible for making this event happen. ■

Dean Roesler

Editor

President's Report

The Cream of Cymbidiums

Do yourself a favour and consider attending the inaugural Australian Cymbidium Show at Ararat on the weekend of 7th and 8th September 1996. Judging by the exhibitors who have already indicated they will be in attendance, this Show will be an eye-opener to all who make the effort to view this spectacular.

I have no doubt this Show will represent Australia's finest collection of cymbidiums ever assembled in one location. Combine this with an energetic Show Committee, the enthusiastic staff of the Rural City of Ararat, and the recipe is in place for a memorable weekend in rural Victoria. I hope to see you there.

A Call to Tasmania and Queensland

With the recent expansion of the National cymbidium movement to include Western Australia, it seems logical that an open invitation now be extended to cymbidium enthusiasts in Tasmania and Queensland. With the Australian Review now show-casing cymbidiums in every edition, a great opportunity exists for clubs in other states to share in our progress.

The initial size of a state club can be quite small — say 10 members. Through the A.O.R. we nevertheless have a vehicle to channel new members to the fold. Wouldn't it be great if by the year 2000 a Queenslander won the accolade as owner of the Cymbidium of The Year, and/or a National Cymbidium Show was held in Tasmania. Should anyone be interested in forming a club in either state please ring me on 08 2808490.

To Readers of the A.O.R.

There seems to be a misunderstanding in some quarters by subscribers of the Australian Orchid Review. The National Committee has an exciting charter to pursue, with just three of our major objectives to date being achieved.

— this National Journal

— our National Show

— annual Sponsored Awards.

For us to serve our membership, it is important that membership of the state Cymbidium Clubs continue to grow. For $36 each year, a member receives this journal, plus the benefits that each state club has to offer. From this fee $6 per year is paid to the Australian Cymbidium Society Inc. to enable us to pursue our short and longer term goals.

Even if you are unable to participate in club activities, it is quite important that you join a state club and assist in the growth of the National Society. To serve you, we need you! ■

Graham Guest

President

"CYMBIDIUMS — KING OF THE ORCHIDS"

Awards From New South Wales

Les Buckley received a Certificate of Distinction For Outstanding Culture for his flowering of the Australian species *Cym. suave* on 2nd November 1995. An equally well grown and flowered plant of *Cym. suave* also received a Certificate of Distinction for Outstanding Culture for its owners Bill and Jenny Lennon on the 3rd November 1995. Congratulations are extended to these owners for these outstanding achievements.



Cym. suave. Owners: Bill and Jenny Lennon

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HOW TO JOIN A CYMBIDIUM CLUB IN YOUR STATE

CYMBIDIUM CLUB OF AUSTRALIA INC.

Meetings are held on the 1st Thursday of each month (except December, January and February)

Meetings commence 8.00 p.m.

Venue: The Bexley Masonic Hall, Forest Road, Bexley, Sydney, N.S.W.

For further details contact Secretary, Helen Schultz,

1 Cliff Avenue, Peakhurst, N.S.W. 2210 Phone: (02) 5335148

President, Mal Ferguson, Phone: (02) 871 8993

CYMBIDIUM CLUB OF SOUTH AUSTRALIA INC.

Meetings are held on the 4th Wednesday of each month (except December and January)

Auditorium open from 7.00 p.m. — Beginners' Group commences 7.20 p.m.

Main Meeting commences 8.00 p.m.

Venue: The Burnside Community Centre, 401 Greenhill Road, Tusmore, Adelaide, S.A.

For further details contact Secretary, Graham Shevlin,

22 Australian Avenue, Clovelly Park S.A. 5042 Phone: (08) 2767652

President, Ross Woolford, Phone: (08) 2807083

THE CYMBIDIUM CLUB OF WESTERN AUSTRALIA

Meetings are held on the 1st Thursday of each month (except January and February)

Beginners' Group commences 7.30 p.m. — Main Meeting commences 8.00 p.m.

Venue: Red Cliffs Hall, Morrison Road, Red Cliffs, W.A.

For further details contact Secretary, Patricia Hatch, Pager No. 016981087 — President, Ron Ker, (09) 3970661 (after 6.00 p.m.) or Ezi-Gro Orchids, (09) 3432761

THE CYMBIDIUM ORCHID SOCIETY OF VICTORIA INC.

Meetings are held on 2nd Tuesday of each month (except January)

Popular Vote commences 7.50 p.m. — Main Meeting commences 8.00 p.m.

Venue: The Conference Centre, Holmesglen College of TAFE, 585 Waverley Road, Glen Waverley, Melbourne, Victoria.

For further details contact Secretary, Kevin Brown, 4 Riviera Street, Mt Waverley, Victoria 3149 Phone: (03) 98081224

President, Ern Kettle, Phone: (03) 5555646

South Australian Club News

SPRING SHOW

Presented by
CYMBIDIUM CLUB OF S.A. INC.
To be held from
Monday 26th August to Saturday 31st August
During shopping hours
at
WESTFIELD SHOPPINGTOWN
West Lakes

GALA DINNER MEETING

To be held
7 pm Wednesday 28th August
at the
BURNSIDE COMMUNITY CENTRE
401 Greenhill Road, Tusmore, S.A.
Highlights
After Dinner Speakers
ANDY EASTON & ERN KETTLE
Presentation of the major prizes awarded at the Spring Show
Booking
Cost for this exciting evening is $25.00
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P.O. Box 188, Willunga, S.A. 5188
Phone: (085) 562408

ORCHID OF THE NIGHT

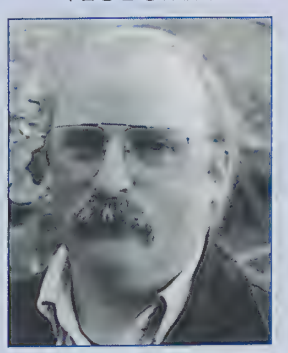


At the April Meeting of the Cymbidium Club of S.A. Inc. *Cym.* Wild Art '105' was judged Orchid of The Night. From the crossing of *Cym.* Wild Colonial Boy x *Cym.* Artful Dodger made by Andy Easton, this yellow intermediate with bold red lips was displayed by owners Guest Orchids.

STATE EDITORS

Send all Cymbidium Articles for inclusion in A.O.R. to one of the following:

VICTORIA



DAVID ALLEN
18 Wootten Crescent, Langwarrin,
Victoria, 3910
Phone: (03) 97891501

NEW SOUTH WALES



PETER ROCHFORT
P.O. Box 639, Gosford,
N.S.W. 2250
Phone/Fax: (43) 74 1353

SOUTH AUSTRALIA



GORDON BROOKS
47 Flinders Parade, Flinders Park,
S.A. 5025
Phone: (08) 3523025

Victorian Club News

C.O.S.V. June Meeting Report

The June meeting saw 85 members enjoy a most cordial and informative night. The night was chilly but clear. The meeting started with the president welcoming some interstate guests and three new members. The club has embarked on a membership drive and has now encouraged 15 new members to take advantage of all that the club has to offer. The membership is now approaching 150 with our target, for the 1996/97 season, in excess of 200 members.

The club also welcomes Peter Yeats as the COSV Photographer. Peter does not grow Cymbidiums so he can concentrate on getting good photographs at our meetings. Peter does have a connection to Orchids, his wife is a member of the Australian Native Orchid Society, and he has photographed Native Orchids in the bush. Peter is a member of the Melbourne and Warragul Camera clubs. We hope to see some of Peters work, in the AOR, in the near future.

Andre Cleghorn led the cultural discussion. Andre is the proprietor of Flora Laboratories, see his article in the October edition of the AOR, and he took us through the steps of seed raising plants. Terry Poulton supplied a plant with mature seed pods hanging on it. Andre took us through the process of when to harvest the pod and a look at the laboratory procedure that followed. The topic proved to be interesting and fascinated most members.

The main item for the evening was a visit from Bob Campbell, from Sage Horticulture, who recently sponsored the 6 national awards given from the Australian Cymbidium Society. Sage Horticulture has been in the nursery industry for over 25 years. Bob brought a wide range of products with him for his discussion. Members took advantage of some special prices that Bob offered on the night. We thank Bob for his time and suggest to any members, that need anything in the Horticultural line, to contact Bob for a special club price.

There was also an excellent benching of plants for the night. The Open Section saw the large flowered *Cym.* Cronulla 'Devon Meadows' take Best Standard. The Best Intermediate was *Cym.* Mont Niron 'Trinity' and the Best Miniature was *Cym.* Mini Splendor 4n. The best in the Intermediate Section was *Cym.* Willunga Eyecatcher exhibited by D. Scheele. The best in the Open Section and the Judges vote for Orchid of The Night was *Cym.* Mini Splendour 4n. Exhibited by A.&J. Leamon.



Cym. Cronulla 'Devon Meadows'

A bench commentary was given by our Tasmanian connection, Rex Johnson, which was followed by supper and a friendly chat with members.

David Allen
COSV Editor



Cym. Mont Niron 'Trinity'



Cym. Mini Splendor 4n



Ararat Town Hall, built 1898, incorporates an Art Gallery and Arts Centre. Acclaimed as Victoria's Best Renovated Building in 1980.

Ararat the Orchid City

by Dean Roesler

The chill air has a habit of penetrating even the thickest winter woollies and even its residents make fun of its cool, cold climate. One would certainly question the sanity of trying to grow orchids in such a situation, yet many do.

Situated on the Western Highway, the main route between Adelaide and Melbourne, the Rural City of Ararat has also taken on the mantle of "Orchid City". On the 7th and 8th September 1996 Ararat will become just that, or perhaps more appropriately, "The Cymbidium City". For on these days it will play host to Australia's first National Cymbidium Show.

By chance or foresight of its founders the City of Ararat developed within a picturesque environment and at various times in years gone by, citizens have co-operated in improving, and beautifying its recreational facilities. Alexandra Park and Alexandra Sports Ground are outstanding examples of their community efforts.

When Hugh Linaker came from Ballarat in the first year of this century as curator of Parks and Gardens he found that only part of the hillside reserve of fifteen acres had been planted. The rest was a wilderness and the old mining dam at the foot of the hill is still known as "The Mudhole".

Visualising tree-lined walks, bright flower beds with grassy lawns and terraces sloping down to an ornamental lake ringed by evergreens, he soon awakened enthusiasm among young men of the town, and some of the elders too, to make his dream come true.

Working bees began in the Winter of 1904 and sometimes on Wednesday afternoons or other holidays up to five hundred volunteers were at work, clearing and levelling the ground or carting soil for flower plots and planting shrubberies. Patients from the Mental Hospital often came to help. The gardens were re-opened as Alexandra Park by the Mayor, Richard



Alexandra Gardens, established 1901, incorporates Lake, resident bird life, flower beds, fernery, glass houses, orchid display, children's playground and electric barbecues.

PARENTAGE COUNTS:
Development continues

Until recently it was mythology that a beautiful white such as 'Thor' existed in June. The development of autumn and winter flowering cymbidiums continues to reach new heights.

Write for a copy of our seedling list



Cym. (Stargard x Silvan Star) 'Thor'

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David Clark

Hargreaves, in December 1907.

The forebears of Ararat are to be commended for their vision and foresight. So too David Clark, its present Superintendent of Parks and Gardens. For while much was started in the past, David is to be congratulated for the quality of the visual impact Ararat presents to the tourist of today.

In 1973 David was appointed to the position of apprentice-gardener under the instructions of William Stubbs, for the City of Ararat, commencing work on the 1st of February. After just eighteen months he left, having gained the position as Curator of Parks and Gardens for the nearby town of St. Arnaud. He remained there for just seven months, when the position of Superintendent of Parks and Gardens for the City of Ararat became vacant and he got the position.

Apart from restoring the Parks and Gardens of Ararat to their past glory, many changes have transpired, re-establishment of the Fernery/Rockery, the removal of the old conservatory and the development of a Herb Garden, Japanese Garden, and the installation of a large playground which caters for all ages — the entire landscaping of the sloping bank into an Alpine Garden with a meandering path from top to bottom. The edging of all the lawns with bluestone pitchers which defines the paths far more clearly, and the restoration of a very old rotunda and surrounding lawns into a beautiful serene picnic area.

A focal point in the lovely Alexandra Park is the large glasshouse which in season publicly displays one of the largest collections of cymbidiums in bloom anywhere in Australia — a wonderful tribute to David's perseverance and love for growing cymbidiums.

Ararat, The Cymbidium Society of Australia, and the orchid enthusiast, owe a lot to David Clark, whose vision and enthusiasm brings the inaugural National Cymbidium Show to Ararat the Orchid City.

Dean Roesler
Lot 14 Lawson Road
Kalbeeba, S.A. 5118

An overview of *Cym.* Pendragon 'Broadmoor' as a parent in South Australia

by Murray Weston



The 1980s heralded a bright new star on the South Australian orchid scene — *Cym.* Pendragon 'Broadmoor'. It was hailed by many as the stud plant to fill the void between the ultra-early Cym. Peter Pan progeny and the early to mid-season cymbidiums available at that time.

Around 1975, the late Leon Connor from Port Pirie, in the mid-north of South Australia, imported *Cym.* Pendragon 'Broadmoor' from the Rowland Collection, U.S.A.

Guest Orchids were the first to use 'Broadmoor' in their breeding program in South Australia and have led the way with most registered crosses in this state.

Ross and Aileen Gowling from Hackham introduced *Cym.* Pendragon to their nursery in 1980. The Gowling's were to the forefront of early cymbidium cut-flower production and hybridising development in S.A. during this period.

Plants of *Cym.* Pendragon 'Broadmoor' available for purchase were soon accounted for. All who saw it wanted it,





Top Left: *Cym.* Without Peer 'Soft Touch' CE/CCSA — Owner/Hybridiser: Mills Orchid Nursery – *Photo: Eddie Ng.* **Top Right:** *Cym.* Artistic Impression 'Snowdrop' CE/CCSA — Owner/Hybridiser: Guest Orchids. **Above:** *Cym.* Pendragon 'Broadmoor' — Owner: Moss Bray — *Photo: Eddie Ng.*



Cym. Gowlings Gem 'Snow Queen' CE/CCSA – Owner: Denlia Orchids – Hybridiser: W. & A. Gowling



Cym. (Pendragon x Arcadian Melody) 'Halo' — Owner/Hybridiser: Dean Roesler



Cym. Willunga Longlegs 'Bold One' CE/CCSA Owner/Hybridiser: Mills Orchid Nursery



Cym. Sue Guest 'Pretty Girl' — Owner/Hybridiser: Simon Lenkic Orchids — Photo: *Peter Aigner-Muehler*



Cym. Irresistable 'Cass' — Owner/Hybridiser: Guest Orchids



Cym. Sleeping Dragon 'Caroline' CE/CCSA — Owner: Murray Weston — Hybridiser: Easy Orchids — *Photo: Eddie Ng*



Cym. Veronica Hoffman 'Tojo' — Owner/Hybridiser: Dean Roesler



Cym. Peninga 'Bi-Centennial' — Owner/ Hybridiser: Guest Orchids

and why not, for here in the middle of May was this delightful cream intermediate cymbidium displaying a lovely contrasting red labellum, with lots of flowers which literally kept "till the cows come home".

A multitude of serious and would-be hybridists descended upon their hapless plants of *Cym.* Pendragon with toothpicks and matchsticks. Is it any wonder then that every spike of 'Broadmoor' was heavily laden with seed pods! For all were convinced that the countless crossings would produce hundreds of great new champions.

Now, a decade later let us assess *Cym.* Pendragon 'Broadmoor' and its progeny. First let us take a look at both the positive and negative aspects of *Cym.* Pendragon 'Broadmoor'.

Positive Aspects

It is free flowering, producing long spikes with 20 to 40 flowers per spike and is multi-spiking. The spikes can be presented cascading, arching, decorative, or can be trained straight upright. The same bulb can flower twice a year, or in successive years — May and September or October. The leads grow rapidly, with spikes appearing off immature leads.

It is very fertile and carries pods well. Bud drop is rare, unlike many other early varieties, and this trait is passed on to its progeny.

When mated to plants with small bulb and leaf growth, the resultant progeny generally display acceptable leaf and bulb size but with improved spike length and flower count.

Negative Aspects

It has big bulbs, big leaves, and is a slow grower — rarely producing two leads per bulb. The spike although long is relatively weak, particularly the last 30cm at the top. It has a long dormant period between the end of flowering and growth, five to six months.

It passes on the above traits when mated to other slow growing cymbidiums, and when bred to large bulbed pollen parents will produce more of the same. It produces a high percentage of "muddy" coloured progeny when mated to other pastel or "muddy" coloured parents. Some of the progeny have "bunchy" spikes, with flowers too close together — detrimental for the showbench, but ideal for pot-plant and export cut-flower trade.

As *Cym.* Pendragon 'Broadmoor' is still being used in breeding programs, increasing the ever widening genetic gene pool available, many more top cymbidiums will be seen in the years to come.

Second generation 'Broadmoor' seedlings are about to flower at time of writing, these will surely determine if *Cym.* Pendragon 'Broadmoor' gains the title of "Excellent Parent".

Murray Weston
37 Payton Avenue
Dernancourt
South Australia 5075

TABLE OF REGISTERED *CYM.* PENDRAGON 'BROADMOOR' HYBRIDS MADE BY SOUTH AUSTRALIAN HYBRIDISERS

Registered Name	Other Parent	Hybridiser
After Dinner Mint	Mini Mint	Guest Orchids
Arctic Dragon	White Valley	Guest Orchids
Artistic Impression	Tom Thumb	Guest Orchids
Bridal Choice	Palace Court	Simon Lenkic Orchids
Bulldog	Volcano	J. Jansma
Crystal Brook	Winter Wonder	Simon Lenkic Orchids
Dragon Eyes	Ruby Eyes	Guest Orchids
Dragon Fire	Winter Fire	Mills Orchid Nursery
Dragon Valley	Valley Premier	Mills Orchid Nursery
Gowlings Gem	Sarah Jean	W. & A. Gowling
Irresistible	Fair Delight	Guest Orchids
Jack Dragon	Crackerjack	Guest Orchids
Memoria Robert Lord	Willunga Maltese	Denlia Orchids
Mothers Love	Mothers Day	Valley Orchids
Pendrafire	Beaconfire	Guest Orchids
Penelica	Angelica	Guest Orchids
Peninga	Melinga	Guest Orchids
Puff	Coraki	J. & E. Cuming
Serious Dragon	Sirius	Peter Chiles Orchids
Shastri	Alnwick Castle	J. & E. Cuming
Sleeping Dragon	Sleeping Beauty	Easy Orchids
Sue Guest	Sue	Guest Orchids
Valley Crystal	Bilyara	Valley Orchids
Valley Elegant	Valley Knight	Valley Orchids
Veronica Hoffman	Claude Pepper	Guest Orchids
Willunga Longlegs	Lustrous	Mills Orchid Nursery
Without Peer	Kurun	Simon Lenkic Orchids
Zodiac Sunshine	Ireland	J. Siedel

Benching Plants

by Clive Halls



Clive Halls

The simple act of correctly placing your cymbidiums on the bench can determine whether or not you have flowers this season. Obviously if something as simple as this can spoil your ultimate aim then it is worth spending some time understanding how to go about it.

Just about everybody growing Cymbidiums runs out of space eventually and you need to be selective in what plants you keep each year. (read my article on culling, a separate subject). Growing too many plants for the area you have is a big mistake and one we nearly all make. Far better to keep only one division when you divide a plant and give it the space it deserves than try to keep them all.

The space between plants on the bench should be sufficient to give good air movement and allow good light penetration to all the plants. Besides this well spaced plants are easier to water and keep a good eye out for insects, slugs, snails, two spotted mite etc. Closely benched plants are more prone to disease especially fungal infection.

Insect infestation especially two spotted mite is more likely and harder to control. When it comes to flowering time you have more room to stake, tie and generally look after your spikes.

So we have many good reasons to space out our plants but what constitutes good spacing? It is often recommended to leave a gap equal to the pot size, ie. 10" pots have 10" between plants. This is probably not a bad starting point for plants just repotted, but given say 2 years growth, this may be only half of what is needed.

Try to organise your plants so that all plants are benched in groups of the same size pots. I like to keep the pots in straight lines but you can use diagonal spacing if you like. The main thing is to be able to see right up the lines between the pots for watering, cleaning etc. The leaves should be just touching at their tips. Do not be tempted to fill up the gaps with smaller plants as the purpose is defeated.

You should probably be going through the plants at least every 6 months and moving them if necessary. I have always kept my labels at the back of the plant and the name visible from the front. When you move the plants keep the orientation the same using the label to align the plant. I often try to move the back plants to the front and vice versa.

One will often notice in a collection grown too closely together that those plants near the front, or edge of bench will flower while the back ones do not. All orchids love light and air. Cymbidiums really need to have plenty of light on to their bulbs, if they are too close the leaf canopy prevents this. Sufficient air movement can not be over emphasised for healthy productive plants. Many nurseries monitor air movement and use fans to increase the speed and volume when conditions demand. You must ensure your growing area has enough free movement of air particularly when conditions are hot and humid.

Benches should be high enough to let air circulate under and through. We now do not grow any ferns, or foliage plants, or have anything under the benches that would prevent circulation.

I am sure by now you will wish you hadn't read this as you will probably have to either double your growing area, or get rid of half your collection! Well I can only say just try it with maybe a quarter of your plants and see the results. The extra productivity and better looking, healthier plants will more than repay you for the pain.

Clive Halls, Mt. Beenak Orchids
19 Hackett Cr. Rd,
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AOR098a

Transporting Your Cymbidiums

The Most Difficult Part

by Brian Noble

It was my first orchid show folks. I'd grown cymbidiums since the 1960s but never had I intruded into the exhibition scene. Well there I was in the car park outside the hall. I had the back door of the car open and was carefully lifting my pride and joy up off the floor between the front and back seats. I had the front seat pushed as far forward as it would go, and had driven there in a most uncomfortable position, hunched over the steering wheel. Well slowly I moved backwards, carefully lifting the pot and imagining how good it was going to look on the showbench, when four inches of raceme and two flowers fell down on the floor of the car, and months of tender loving care went down the drain.

If you are about to discover the joys and frustrations of exhibiting your orchids, give considerable thought to this aspect of the hobby. The skills that are developed in producing those magnificent blooms to perfection, are wasted if we are unable to present them to the judges in that pristine condition.

Quickly realising that the family sedan is all but useless for the serious orchid grower, there are really only two options to get our plants to the show. These are of course a van of some description, with the height and width to accommodate the plants without damage, or secondly a trailer with a suitable canopy to provide protection from the elements. There are various means by which plants can be firmly secured, probably the most common being the use of polystyrene boxes.



Brian Noble

These can be used by turning each box upside down and cutting a hole in the centre, of sufficient size to firmly hold each pot as you slide it in. An alternative to this, is to place the boxes base down, and use some form of packing to hold the plants firmly. An old foam mattress cut into blocks of varying sizes to push into the gaps is ideal for this. I prefer this method as the boxes then serve the dual purpose of providing building blocks for a display stand.

There is nothing more disappointing of course, both for the exhibitor and the judge, for the plant to be on the showbench with missing anther caps or labellums, or a petal either cut or torn off. Avoid trying to squeeze two plants into one box just because you want to get that extra plant there. You've put a lot of work into these blooms, so consider tying foliage away from the flowers if necessary, and if you want to really look after that special one, the use of florists tissue paper carefully taped round each spike, is well worth the effort.

Although it is always important to cut any supporting stakes below the top of the spike for display purposes, leave that until the plant is about to be benched. A few centimetres of stake above the top flower will protect it from the roof of the van or canopy, should you get a little careless. Don't forget that arching raceme that may well be heavily laden with flowers — an additional stake placed in the pot at an angle to support the free end of the raceme will stop the damage that can be caused from bouncing and swaying whilst in transit.

Well there you are, easy isn't it? If you're one of the welcome newcomers to this fascinating hobby, and you must be if your reading this, watch the old hands, there's no better way to learn. Above all, take the corners gently on the way to the exciting concept of the inaugural Australian Cymbidium Society Show in Ararat; and if you haven't got a van, borrow, hire, or share one with a fellow exhibitor. You've just got to be there.

Brian Noble
14 Saniky Street
North Clayton
Victoria 3168



Carefully mark and then cut out a hole in the bottom of a polystyrene box, making sure of a nice snug fit.



With the plant held securely in box safe transport to the show venue is made easier. The area of box surrounding the plant also acts as a 'spacer' between plants.

Cymbidiums a

Santa B
Orchid

Text: by Peter Rochfort

The Santa Barbara Orchid Show has been a major attraction for orchid lovers since its inception more than fifty years ago. It has attracted many overseas visitors in addition to enthusiastic growers from all over America. In fact, the Santa Barbara area is probably the most suitable location for cymbidium growing in the United States, and boasts the world's largest cymbidium producer, Gallup and Stribling.

The event has always been noted for the quality of its cymbidiums and the 1996 Annual Santa Barbara Orchid Show, which was held at the Earl Warren Showgrounds, was no exception. The show is unusual in that it is owned, staged and run by the commercial orchid industry rather than by orchid societies. An enormous sales area beside the show pavilion was very heavily patronised and was notable for the exceptional quality and variety of plants for sale. The sales aspect certainly added a popular dimension to the overall interest created by the show. In terms of sheer professionalism and tourist value, this is an event well worth visiting. This year's theme was *'The Art of Orchids'*.

Our introduction to the show was by way of the Special Show Preview Party, which was well attended. Among those present were Gary Gallup from Gallup and Stribling; Freda Duckitt from Duckitt Nurseries in South Africa; Paul Gripp from Santa Barbara Orchid Garden; James Rose from Cal Orchid; Ernest Hetherington and many other famous names from the cymbidium world. There was an excellent buffet provided with food being cooked by chefs on the spot at four different locations around the show. There was also champagne and wine, and music for dancing. The Preview Party provides a wonderful opportunity for orchid enthusiasts to meet one another in a relaxed atmosphere. After sampling the delicious food on offer, we made our way around to the various exhibits.

Frank Ikeda had some excellent entries, including two fine varieties from the cross of *Cym.* Red Beauty x Via Rincon. 'Emiko' received a number of prizes including Reserve Champion Cymbidium of the Show, Best First Blooming Seedling, Best First Blooming Pink Seedling and was awarded an HCC/AOS. 'Kazumi', a similar style flower, also received an HCC/AOS. Another eye-catching variety exhibited by Frank was *Cym.* Clarisse Austin 'Ume', a full-shaped reddish-brown with an attractive red banded labellum.

Paul Gripp's Santa Barbara Orchid Garden display was an entrancing exhibit comprised of old timers including *Cym. l'ansonii,* a bronzy-green species with an orange banded labellum; *Cym. lowianum, Cym. Eburneum, Cym. parishii* var *'sanderae', Cym.* Eburneo-lowianum, the first cymbidium hybrid; and old time hybrids including *Cym.* Ceres 'F J Hanbury', *Cym.* Louis Sander 'Braemar', *Cym.* Rosanna 'Pinkie' and *Cym.*



Display — Santa Barbara Orchid Estate. This famous old nursery staged an interesting display of cymbidiums grouped in colours.



Grand Champion Cymbidium of the Show. *Cym.* Via Spring Snow 'Easter White' exhibited by Gallup and Stribling, also gained an HCC/AOS and Bronze Certificate/CSA.





Top: Display — Ventura County Orchid Society. The Theme of this year's show was "The Art of Orchids".

ne 51st Annual
arbara Show

Photos: by Karen Rochfort





Above: Display — Malibu Orchid Society. Winner of "Sweepstakes Best Display in show".

Pauwelsii 'Comte de Hemptinne'. In an age of showy hybrids, it was fascinating to see a display of species and antique hybrids. I met Paul Gripp at Santa Barbara Orchid Estate the day before the show. He pointed out many early hybrids and famous breeding plants in which the nursery specialises.

Geyserland Orchids' display won Best Foreign Exhibit. Their *Cym.* Mad Doctor 'Anna', a brown with red blotched labellums, carrying five arching spikes, won Best Miniature Cymbidium of the Show. *Cym.* Valerie Brown 'Golden Jubilee', a large, flat, standard yellow carrying nine flowers on a tall spike also gained recognition for Andy.

The Gallup and Stribling display has always been noted for its eye-catching cymbidiums and was no exception in this year's show. A number of spectacular white cymbidiums commanded centre stage in the exhibit. *Cym.* Via Spring Snow 'Easter White' won Grand Champion Cymbidium of the show with its large white flowers and showy red banded labellums. It gained an HCC/AOS and Bronze Certificate from the CSA. Two lovely whites from the cross *Cym.* (Marie Fetzer x Cleo Sherman) were also exhibited. 'White Empress' was a large, flat clear white with a maroon and pink dotted labellum, carrying its flowers on four tall spikes. The other, 'White Princess', carried three tall spikes from a relatively small plant with the same clear white coloration set off by a clean red banded labellum. Another promising white was *Cym.* (Via Spring Snow x Pearl Easter) 'Moonstone', carrying one tall spike of nine large flowers from a small plant. *Cym.* (Finetta x Robert Rowe) 'Pink Star' provided a beautiful complement with its tall spikes of dark pink flowers and darker labellum. *Cym.* [Moyra Easten x (Via Coyote x Via Mar Vista)] 'Red Riding Hood' was an attention getter with three short spikes of dark, oxblood-red flowers and beautiful labellums.

Joal Clayton Orchids was awarded Best Specimen Cymbidium Orchid and the H G Nelson Trophy for a huge plant of *Cym.* Narela 'Jennifer Gail' with ten or more spikes. It was the focal point of the display, which featured a wide variety of cymbidiums. Also notable was *Cym.* Girl Crazy 'Cady', an attractive mid-pink reminiscent of Australia's *Cym.* Gurrana 'Phyllis'.

Probably the most eye-catching display, in terms of its colourful cymbidiums content, was staged by the Torrance Cymbidium Society. Apart from being a large display, it had an excellent variety of cymbidiums in a rainbow of colours.





Top: *Cym.* (Finetta x Robert Rowe) 'Pink Star'. An eyecatching, dark pink exhibited by Gallup and Stribling. **Above:** Best Miniature Cymbidium in Show. *Cym.* Mad Doctor 'Anna' (Doctor Baker x *madidum*), exhibited by Geyserland Orchids, who also won Best Foreign Exhibit.

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A brushing of dark pink to mauve over all the segments which are of a white background colour—a fine standard *Cymbidium.* **CCSA Cymbidium of the Year 1993.**

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Tall erect spikes of bright chocolate intermediate sized blooms with distinctive red barred lips. **CCSA Cymbidium of the Year 1991.**

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Harry and Yo Koumo's *Cym.* Clarisse Austin 'Yo' was an attention getter, carrying two spikes of large, full-shaped dark browny-red flowers complemented by a beautiful red banded labellum. It was well deserving of its HCC/AOS. Nearby was the Bronze Certificate winning, *Cym.* Richard Tauber 'Tsutomu', a soft pink intermediate carrying around twenty-six shapely flowers on a tall arching spike. Adding to the splashes of colour in the display were several varieties of *Cym.* Valley of Death (Yowie Flame x Mighty Mouse), the most notable being 'Geyserland' and 'Inferno', which carried tall spikes of shapely orangy-brown flowers with red labellums, reminiscent of their *Cym.* Might Mouse ancestry. *Cym.* James Toya 'Geyserland' (Yowie Flame x Red Beauty), another New Zealand creation, carried tall spikes of very shapely, large dark oxblood coloured flowers. Best Novelty Cymbidium Potted Plant went to the most unusual *Cym.* Nut 'Isamu' with its tall spikes of approximately twenty starry striped brown flowers. The Torrance Cymbidium Society has been making a name for itself as a very enthusiastic and active club. This was reflected in the wonderful quantity, quality and variety exhibited by its members.

Best Intermediate Cymbidium and an HCC/AOS went to *Cym.* Karen Pepper 'Raspberry Ice', a full shaped, dark wine coloured flower carrying thirteen flowers with near black banded labellums.

Jim Burkey's Orchids Royale staged an



Reserve Champion Cymbidium of the Show. *Cy*
(Red Beauty x Via Rincon) 'Emiko', exhibited
Frank Ikeda. Also won Best First Blooming Seedli
Best First Blooming Pink Seedling and was award
an HCC/AOS.

attractive display with cymbidiums set in boxes. Jim was awarded the Dupont Trophy for the Best Group of First Blooming Standard Cymbidiums for several seedlings from the cross *Cym.* African Sky (Claudona x Mighty Mouse). Most were shapely bronze flowers with attractive red banded labellums. Also receiving first place in its class was a plant of *Cym.* Devon Lord 'Viceroy' AM/AOS, carrying seven spikes of very round medium brown intermediate flowers with a *Cym.* Rincon 'Clarisse' style labellum. Adding to the colour were several plants of *Cym.* Pontac 'Trinity', a British import, with its round shapely red flowers and red banded labellums.

N' Go Orchids of Pasadena exhibited *Cym.* Regal Ruby 'N'Go' (Claude Pepper x Red Beauty), a very shapely, large dark pink with a red banded *Cym.* Red Beauty style labellum.

The trend in California seems to be similar to that which is current in Australia. Hobbyists and pot plant growers are concentrating on a rainbow of bright colours; while cut flower growers are characterised by an emphasis on white and pastel shades, with only a small percentage of brightly coloured varieties. The growing pot plant trade in America seems to be giving added emphasis to this trend. The contrast contributed to a most enjoyable display of cymbidiums at the 51st Annual Santa Barbara Orchid Show.

Peter Rochfort



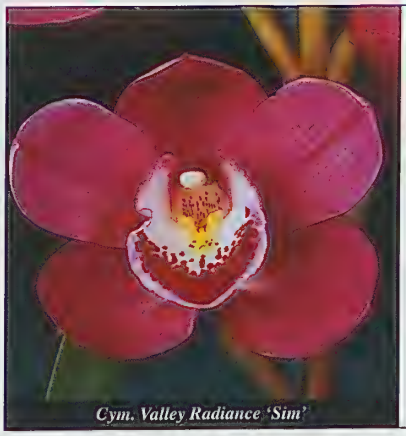
m. Pauwelsii 'Comte de Hemptinne', from Paul
op's Santa Barbara Orchid Garden display, was
n a cross of two species — *Cym. insigne* x
ianum. It was originally registered by Pauwels in
1. 'Comte de Hemptinne' was a chance tetraploid,
ch went on to become a famous breeding plant.
ny of the old breeding plants which appear in the
kground of our modern hybrids are now quite rare.



Cym. (Marie Fetzer x Cleo Sherman) 'White Princess'. An Excellent example of a modern cut flower exhibited by Gallup and Stribling, the world's largest cymbidium producer.



Cym. Clarisse Austin 'Ume', a shapely, colourful flower exhibited by Frank Ikeda from the cross of *Cym.* Tapestry and *Cym.* Rincon.



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DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
New South Wales				
16 August 17 August 18 August	10.30am-5.00pm 9.00am-5.00pm 9.00am-4.00pm	Winter	Sapphire Coast Orchid Club	Twyford Hall Princess Highway Merimbula
17 August	10.00am-4.30pm	Winter	Bellinger Valley	Anglican Church Hall Oak Street, Bellingen
17-18 August	8.00am-5.00pm	Winter	North Shore	Memorial Hall Starkey Street, Forestville
22-24 August	Shopping Centre Hours	Spring	Illawarra District	Crown Central Wollongong
28-31 August	Shopping Centre Hours	Winter	Ku-Ring-Gai	Westfield Shoppingtown Hornsby
28-31 August	Shopping Centre Hours	Spring	Cumberland Orchid Circle	Winston Hills Shopping Village Caroline Chisholm Drive Winston Hills (Near Big W)
28-31 August	Shopping Centre Hours	Winter	Newcastle	Croudace Road Elermore Vale
31 August 1 September	9.00am-5.00pm	Spring (Native Orchid Show)	Australasian Native (Newcastle Group)	University Hall Cnr. King & Auckland Streets Newcastle
31 August 7 September	9.00am-5.00pm	Spring	Fairfield District	Bass Hill Plaza Polding Street, Wetherill Park
2-7 September	Shopping Centre Hours	Spring	Eastwood & District	Macquarie Shopping Centre North Ryde
2-4 September	8.30am-5.30pm	Spring	Manning River	Manning Mall, Taree
4-7 September	Shopping Centre Hours	Spring	Parramatta & District	The Hills Shopping Centre Cnr. Prospect Highway and Federal Road, Seven Hills
5-7 September	Shopping Centre Hours	Spring	Campbelltown & District	Minto Mall Shopping Centre Minto
5-6 September 7 September	9.00am-6.00pm 9.00am-4.00pm	Spring	Nambucca Valley	Scouts Hall Partridge Street, Macksville
5 September 6 September 7 September	10.00am-8.00pm 8.30am-6.30pm 8.30am-3.00pm	Spring	Upper Hunter	Lancasters' Showroom John Street Singleton
5-8 September	Shopping Centre Hours	Spring	Western Suburbs	Ashfield Mall Shopping Centre Liverpool Road, Ashfield
6 September 7 September 8 September	12 noon-9.00pm 9.00am-6.00pm 9.00am-4.00pm	Spring	Berowra & District	Berowra Community Centre The Gully Road Berowra
6 September 7 September	10.30am-5.00pm 9.00am-3.00pm	Spring	Eurobodalla Orchid Club	C.W.A. Hall Queen Street, Moruya
7 September	8.30am-5.00pm	Spring	Alstonville	Uniting Church Hall Alstonville
8-15 September	9.00am-6.00pm	Spring	Eastern Suburbs	Birkenhead Factory Outlet Centre, Five Dock
9-14 September	Shopping Centre Hours	Spring	Gosford & District	Market Place Gosford
9-14 September	Shopping Centre Hours	Spring	North Shore	Mandarin Centre Cnr. Albert Avenue & Victor Street Chatswood
11-14 September	9.00am-7.00pm	Spring	Coffs Harbour	Palm Centre Coffs Harbour
11-13 September 14 September	8.30am-9.00pm 8.30am-2.00pm	Spring	South Coast	Corrimal Court Shopping Centre Princes Highway, Corrimal
12-14 September	Shopping Centre Hours	Spring	Hawkesbury District	Magnolia Mall Richmond
12-14 September	Shopping Centre Hours	Spring	Maitland & Coalfield District	The Hunter at Green Hills Mitchell Drive Green Hills, East Maitland
12-14 September	8.00am-9.00pm	Spring	Port Macquarie	Settlement City Shopping Centre

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
13-14 September	10.00am-5.00pm	Spring	Byron District	Mullumbimby Ex-Servicemen's Club
13 September 14 September 15 September	11.00am-5.00pm 8.00am-5.00pm 8.00am-4.00pm	Spring	Woodburn	Woodburn Memorial Hall Pacific Highway Woodburn
14 September 15 September	12 noon-5.00pm 9.00am-4.00pm	Spring	Blue Mountains & District	Melrose Hall Great Western Highway & Park Street Emu Plains
17-21 September	Shopping Centre Hours	Spring	Central Coast/Hunter Region Cymbidium	Jewellstown Plaza Mtaba Road, Belmont North
17-21 September	Shopping Centre Hours to 2.00pm Saturday	Spring	Boolaroo	Garden City Cnr. Park Avenue & Northcott Drive, Kotara
19-21 September	Shopping Centre Hours to 3.00pm Saturday	Spring	City of Lismore	Lismore Central Shopping Centre Carrington Street, Lismore
19-21 September	Shopping Centre Hours	Spring	Grafton District	Grafton Shopping World Grafton
19-21 September	Shopping Centre Hours	Spring	Macarthur & District	Casula Mall Kurrajong Road, Casula
19-21 September 22 September	9.00am-5.30pm 9.00am-3.30pm	Spring	Sutherland Shire	Catts Nursery 80 Port Hacking Road, Sylvania
20 September 21 September	12 noon-5.00pm 9.30am-5.00pm	Spring	Shoalhaven	Presbyterian Church Hall Kinghorne Street, Nowra
21 September	11.00am-3.30pm	Spring	Gloucester & District	Gloucester Bowling Club Park Street, Gloucester
21 September	9.30am-4.30pm	Spring	Panania & East Hills (RSL)	Panania Senior Citizen Hall Cnr. Anderson and Peffer Streets Panania
21 September 22 September	11.00am-5.00pm 9.00am-4.30pm	Spring	Griffith	Wade High School Poole Street, Griffiths
27 September 28 September	9.00am-5.30pm 9.00am-4.30pm	Spring	Casino & District	R.S.L. Hall Canterbury Street, Casino
27-28 September	9.00am-5.00pm	Spring	Sapphire Coast Orchid Club	Bega Valley Motors Gipps Street, Bega
28-29 September 30 September	9.30am-4.00pm 9.30am-3.00pm	Spring	Camden Haven	Catholic Church Hall Ocean Drive, Laurieton
28 September 29 September	11.00am-5.00pm 9.00am-4.00pm	Spring	Wagga Wagga	Sturt Public School Lake Albert Road Wagga Wagga
5 October 6 October	9.00am-5.00pm 9.00am-4.00pm	Spring (Aust. Inland Champ. Show)	Albury-Wodonga Orchid Club	Albury Convention Centre Swift Street Albury
5-8 October	Shopping Centre Hours	Spring (Mattara Festival)	Newcastle	Honeysuckle Development Corp. Mall 251 Wharf Road, Newcastle
6 October	9.00am-3.00pm	Spring	Southern Riviena	Showground Milton
11-13 October	9.00am-6.00pm	Spring (2UE Garden & Home Show '96)	New South Wales	Royal Hall of Industries R.A.S. Driver Avenue, Moore Park
12-13 October	9.00am-5.00pm	Spring (Sarcanthinae Show)	Australasian Native (Newcastle Group)	University Hall Cnr. King & Auckland Streets Newcastle
ACT				
21 September 22 September	11.00am-5.00pm 12 noon-5.00pm	Spring	Canberra	St. Johns Hall Cnr. Constitution Avenue & Anzac Parade, Reid
Queensland				
8-10 August	Shopping Centre Hours	Winter	Darling Downs Orchid Association	K Mart Shopping Centre Ruthven Street Toowoomba
21-24 August	9.00am-6.00pm	Spring	Maroochydore	Kawana Shopping World Nicklin Way, Kawana

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
24 August 25 August	9.00am-5.00pm 9.00am-3.00pm	Winter	Logan & District	Senior Citizen's Hall Jacaranda Avenue, Woodridge
29-31 August	Shopping Centre Hours	Spring	Pine Rivers	Deception Bay Market Place Deception Bay
29-31 August	TBA	Spring (Strawberry Festival)	Redlands	Cleveland Showgrounds Cleveland
29-31 August	Shopping Centre Hours	Spring (Gold Coast Show)	The Gold Coast	Jupiters Pavilion Parklands Complex Cnr. Parklands Drive and Smith Street Southport
30-31 August 1 September	9.00am-5.00pm 9.00am-3.00pm	Spring	North Coast	Big Pineapple Woombye
30-31 August 1 September	9.00am-9.00pm 9.00am-5.00pm	Spring	Townsville	Townsville City Council Administration Building Walker Street, Townsville
31 August 1 September	9.00am-5.00pm 9.00am-4.30pm	Spring	North Brisbane	Mt Coot-tha Botanic Gardens Auditorium
5-7 September	Shopping Centre Hours to 4.00pm Saturday	Spring	Redcliffe	Peninsula Fair Shopping Centre Kippa-Ring
6-7 September 8 September	9.00am-5.00pm 9.00am-2.00pm	Spring	Noosa District Orchid & Foliage	Carramar Home For the Aged Cooroy-Tewantin Road, Tewantin
7 September 8 September	9.00am-5.00pm 9.00am-2.00pm	Spring	Childers & Isis District	Cultural Centre Churchill Street, Childers
7 September 8 September	8.30am-5.00pm 9.00am-4.00pm	Spring	Orchid Species	Mt Coot-tha Botanic Gardens Auditorium
12-13 September	8.00am-5.00pm	Spring	Emerald Orchid & Foliage	Village Shopping Centre Hospital Road, Emerald
12-13 September 14 September	9.00am-6.00pm 8.00am-1.00pm	Spring	Lockyer Valley	Lutheran Church Hall Laidley
13 September 14 September 15 September	9.00am-4.00pm 9.00am-5.00pm 9.00am-4.40pm	Spring	Queensland	Mt Coot-tha Botanic Gardens Auditorium
18-21 September	Shopping Centre Hours	Spring	Mackay & District	Caneland Shoppingtown Mackay
19-21 September	9.00am-3.00pm	Spring	Maryborough District	St. Paul's Memorial Hall Adelaide Street, Maryborough
19-21 September	Shopping Centre Hours	Spring	West Moreton Orchid Group	Ipswich City Square Ipswich
21 September 22 September	8.30am-5.00pm 8.30am-3.00pm	Spring	Eastern District	Wondall Heights State School Wondall Road, Wynnum West
21-27 September 28 September	8.30am-6.00pm 8.30am-3.00pm	Spring	Darling Downs Orchid Association	Centennary Heights High School Assembly Hall Cnr. Ramsay & South Streets Toowoomba
21-28 September	TBA	Spring (Toowoomba Carnival of Flowers)	Toowoomba	Harristown State High School Assembly Hall
21 September 22 September	8.30am-5.00pm 8.30am-4.00pm	Spring	West Brisbane	Mt Coot-tha Botanic Gardens Auditorium
27 September 28 September	9.00am-6.00pm 9.00am-2.00pm	Spring	Glasshouse Country	Community Centre Simpson Street Beerwah
2-5 October	Shopping Centre Hours to 12 noon Saturday	Spring	Bundaberg	Sugarland Shoppingtown Takalvan Street Bundaberg
3 October 4 October 5 October	8.30am-9.00pm 8.30am-5.30pm 8.30am-3.30pm	Spring	Sunshine Coast Caloundra	Sunland Shopping Centre Bowman Road Caloundra
11-12 October 13 October	9.00am-5.00pm 9.00am-4.00pm	Spring	Aspley	Community Hall Edinburgh Castle Road Wavell Heights

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
12-13 October	8.30am-4.30pm	Spring	Bribie Island	Bribie Island Indoor Bowls Hall First Avenue, Bribie Island
13 October	8.00am-4.00pm	Spring (Sarcochilus (Festival)	Native of Toowoomba	Harristown State High School Assembly Hall South Street, Toowoomba
17-19 October	Shopping Centre Hours	Spring (Tropicarnival '96)	Southport & Districts	Burleigh West Shopping Centre West Burleigh Road West Burleigh
Victoria				
5-10 August	Shopping Centre Hours	Winter	Victorian Orchid Club	Southland Shopping Town Nepean Highway, Cheltenham
5-11 August	Shopping Centre Hours	Winter (Cranbourne Show)	Mornington Peninsula	Cranbourne Park Shopping Centre High Street Cranbourne
10 August 11 August	12 noon-5.00pm 10.00am-2.00pm	Winter (Inter-Club Comp.)	Horsham & District	Town Hall Supper Room Wilson Street, Horsham
10 August 11 August	10.00am-4.30pm 9.30am-4.00pm	Winter	West Gippsland Orchid Club	St. Kieran's Hall Lloyd Street, Moe
16-18 August	Garden World Centre Hours	Winter (Conference Show)	Orchid Society Council of Victoria	Garden World Springvale Road Keysborough
17-25 August	TBA	Winter (Atrium Spectacular)	Victorian Orchid Club	Cnr Bluff & South Road Hampton
24 August 25 August	10.00am-5.00pm 10.00am-4.00pm	Winter	Gippsland Orchid Club	St. Mary's Hall Cnr. Pearson and Macalister Streets Sale
31 August-1 September	10.00am-4.30pm	Spring	Southern Suburbs	N.G. Wishart Senior Citizens Hall Nepean Highway Moorabbin
7 September 8 September	9.00am-5.00pm 10.00am-4.00pm	Spring (Inaugural National Cymbidium Show)	Australian Cymbidium	Ararat Town Hall, Barky Street Ararat
7-8 September	9.00am-5.00pm	Spring	Maribyrnong	Maribyrnong Community Centre Randall Street Maribyrnong
13-14 September	10.00am-4.30pm	Spring	South Gippsland	Wonthaggi Town Hall McBride Avenue Wonthaggi
14-15 September	10.00am-4.00pm	Spring	North East Melbourne	Bulleen Heights School Pleasant Road Bulleen
20 September 21 September	10.30am-4.00pm 9.30am-4.00pm	Spring	Bairnsdale & District Orchid Group	St. Mary's Parish Hall Pyke Street Bairnsdale
20-22 September	9.30am-4.30pm	Spring	Sunraysia Orchid Club	Greek Orthodox Hall 312 Deakin Avenue, Mildura
21-22 September	10.00am-4.30pm	Spring	Berwick	Senior Citizens Hall 112 High Street, Berwick
21 September 22 September	9.00am-5.00pm 9.00am-4.00pm	Spring	Melbourne Western	Werribee Racecourse Bulban Road Werribee
21 September 22 September	9.00am-6.00pm 9.00am-4.00pm	Spring	Maroondah	Nunawading Arts & Entertainment Centre Whitehorse Road Nunawading
21 September 22 September	9.30am-5.00pm 9.30am-4.00pm	Spring	Warragul	Arts Centre, Civic Place Warragul
23-28 September	Shopping Centre Hours	Spring	Victorian Orchid Club	Southland Shopping Town Nepean Highway Cheltenham
21 September 22 September	9.30am-5.00pm 9.30am-4.00pm	Spring	West Gippsland	West Gippsland Arts Centre Civic Place Warragul

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
27-28 September 29 September	9.00am-9.00pm 10.00am-5.00pm	Spring (World of Orchids)	Melbourne Eastern	St. Leonard's Parish Hall 349 Springvale Road Glen Waverley
28 September 29 September	12 noon-6.00pm 10.00am-4.00pm	Spring (Annual North Eastern Orchid Show)	Wangaratta & District	Wangaratta Secondary College Assembly Hall Greta Road Wangaratta
4 October 5 October 6 October	12.30pm-6.00pm 9.00am-6.00pm 10.00am-4.00pm	Spring (Bendigo Orchid Show)	Bendigo Orchid Club	Kangaroo Flat Leisure Centre Browning Street Kangaroo Flat
5-6 October	TBA	Spring	Albury/Wodonga	Albury Convention Centre Swift Street Albury
5-6 October	9.00am-5.00pm	Spring	Stawell	S.E.S. Hall, Sloane Street Stawell
5 October 6 October	10.00am-5.00pm 10.00am-4.30pm	Spring (Geelong Orchid Festival)	Geelong Orchid & Indoor Plant Club	Centenary Hall Cox Road Norlane
5 October 6 October	10.00am-5.00pm 10.00am-4.00pm	Spring	Gippsland Orchid Club	Kildare College Hall Kosiosko Street Traralgon
5-6 October	9.00am-5.00pm	Spring	Goulburn Valley Orchid Club	Emerald Banks Goulburn Valley Highway Shepparton South
5 October 6 October	11.00am-5.00pm 10.00am-4.30pm	Spring	Warrnambool	Warrnambool College Hall Kosciusko Street Traralgon
5 October 6 October	10.00am-6.00pm 10.00am-5.00pm	Spring	Warrigal	Red Cross Centre Gate 7 Repatriation Centre Bell Street, Heidelberg
7-12 October	Shopping Centre Hours	Spring	Ringwood	Eastland Shopping Centre Ringwood
7-12 October	Shopping Centre Hours	Spring (Karingal Show)	Mornington Peninsula	Karingal Hub Shopping Centre Cranbourne-Frankston Road Frankston
11 October 12 October 13 October	1.00pm-6.00pm 10.00am-6.00pm 10.00am-4.00pm	Spring	Ballarat	St. Patricks Hall Dawson Street Ballarat
12 October 13 October	11.30am-4.30pm 10.30am-4.30pm	Spring	Colac	Colac High School Princes Highway Colac
13-15 October	TBA	Spring (Town & Country Show)	Victorian Orchid Club & Affiliated Societies	The Centre Point Royal Melbourne Showground Epsom Road, Ascot Vale
17-19 October	Shopping Centre Hours	Spring	Hamilton	Thompsons Plaza Hamilton
18 October 19-20 October	12 noon-5.00pm 10.00am-5.00pm	Spring	Midlands	"Skydancers" Blackjack Road Harcourt
19 October 20 October	10.00am-4.00pm 11.00am-4.00pm	Spring	Cobden & District Orchid Club	R.S.L. Hall Victoria Street, Cobden
19 October 20 October	10.00am-5.00pm 10.00am-4.00pm	Spring	Yarra Valley	Seville Hall Warburton Highway, Seville
25-26 October 27 October	10.00am-5.00pm 10.00am-4.00pm	Spring	Ararat	Town Hall Barkly Street, Ararat
South Australia				
26-31 August	Shopping Centre Hours	Spring	Cymbidium Club of SA	Westfield Shoppingtown West Lakes
14 September 15 September	10.00am-5.00pm 11.00am-5.00pm	Spring	Northern and Eastern Districts	St. Peters Town Hall 101 Payneham Road St. Peters
14 September 15 September	9.00am-5.00pm 10.00am-4.00pm	Spring	Port Lincoln	Kallinyalla Nursery

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
16-21 September	9.00am-5.00pm	Spring	South Australian	Burnside Village Shopping Centre 447 Portrush Road Glenside
20 September 21 September	12 noon-6.00pm 9.00am-4.00pm	Spring	Bridge & Districts Orchid Club	John Dohler Hall (Adjacent to Lutheran Church) Swanport Road Murray Bridge
22-28 September	Shopping Centre Hours	Spring	Whyalla Orchid Club	Westland Shopping Centre Nicolson Avenue, Whyalla
Western Australia				
8 August 9 August	8.30am-9.00pm 8.30am-5.30pm	Winter (Display)	Peel Region of WA	Halls Head Shopping Centre Halls Head via Mandurah
4 September	7.00pm-	Spring (Judged)	Peel Region of WA	Thompson Street Pavilion Thompson Street, Mandurah
4-7 September	Shopping Centre Hours	Spring	Mandurah & District Orchid Club of WA	Rockingham Shopping centre
5 September 6-7 September	8.30am-9.00pm 8.30am-5.30pm	Spring (Display)	Peel Region of WA	Mandurah Forum Shopping Centre Mandurah City
18-21 September	Shopping Centre Hours	Spring	Western Australia	Metro Maddington Shopping Centre Allfield Street Maddington
19-21 September	Shopping centre Hours to 3.00pm Saturday	Spring	Wanneroo	Warwick Shopping Centre Beach Road Warwick
20-21 September	10.00am-5.00pm	Spring	Augusta & Districts	Centennial Hall Augusta
26-28 September	Shopping Centre Hours	Spring	Albany	North Road Shopping Centre Albany
26-28 September	8.30am-5.30pm	Spring	Bunbury	Bunbury Forum Shopping Centre Sandridge Road, Bunbury
Tasmania				
26 September 27 September	2.00pm-5.30pm 9.00am-5.30pm	Spring	Tasmanian	Hobart Town Hall Hobart
4 October 5 October	1.30pm-5.00pm 10.00am-4.30pm	Spring	Devonport	Maidstone Park Hall Spreyton, Devonport
11 October 12 October 13 October	1.30pm-7.00pm 9.00am-7.00pm 9.00am-4.00pm	Spring	Burnie	Town Hall Burnie Civic Centre Off Jones Street, Burnie
New Zealand				
30 August 31 August 1 September	11.00am-5.00pm 10.00am-5.00pm 10.00am-4.00pm	Spring	Whangarei	Forum North Exhibition Hall Whangarei
13 September 14 September 15 September	9.30am-8.00pm 9.30am-5.30pm 9.30am-5.00pm	Spring	New Zealand	Mt. Albert War Memorial Hall New North Road Mt. Albert, Auckland
20 September 21 September 22 September	1.00pm-5.00pm 10.00am-5.00pm 10.00am-4.00pm	Spring	Hawke's Bay	Indoor Basketball Stadium Railway Road Hastings
4 October 5 October	12 noon-5.30pm 9.30am-3.30pm	Spring	Bay of Islands	Keri Keri
5 October 6 October	10.00am-5.00pm 11.00am-4.00pm	Spring	Wanganui	Wanganui City College Ingestre Street Wanganui
South Africa				
28 August-1 September	9.00am-9.00pm	Spring	Northern Transvaal	Sunny Park Centre Pretoria
6-8 September	9.00am-5.00pm	Spring	Cape	Exhibition Hall Kirstenbosch Botanic Gardens Newlands, Cape

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Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
14 McGill Street, Lewisham, NSW 2049
Australia.
Phone: (02) 9560 6166. Fax: (02) 9560 6677

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Cym. Mem. Merv Dunne "Mystic Snow". Our albino breeding program has been greatly expanded. Our next catalogue will offer many superior albino crossings – including several with *Valley Zenith "Green Orb"* which carries the albino gene.



Cym. Pure Snow "Mystic Glen". Another of our many albino stud plants which will be appearing in our future catalogues. When crossed with the likes of our Valley Zenith "Green Orb" we would expect to see a substantial improvement in albino breeding.



Cym. Prophetic Dream "Bold Vintage". Created from *"Nostradamus* x *Dream Girl"* this is typical of what has been flowered so far. Seedlings from our Prophetic Dreams will be a feature of our 1997 seedling flask list.

On the 1st of July Glenwood Orchids commenced its 21st Anniversary year and we will be celebrating this event until June '97 by offering our clients a host of *SPECIAL OFFERS throughout this period.*

In addition to *our* anniversary, our Director, Bill Johnson, will complete his 50th year of orchid growing in '97 *(he's uncertain if he should laugh or cry at this time!).*

Anyway we will be celebrating for him too with our best catalogues . . . ever. And there are some very special offers to come.

Our 1997 Cymbidium Flask and community pot list will be released in the spring and they will include a host of new parents from our own breeding program, and, more *Ovens Valley* and *Valley Zenith "Green Orb"* crossings.

Those who intend visiting the Cymbidium Society's Ararat Show in September will ber offered a special on our Cymbidium flasks just for that weekend. We will be delighted to meet our many clients there.

Those who are in need of immediate supplies of flasks should note that we can usually supply flasks of *Cymbidiums, Cattleyas, Natives and other genera EX-STOCK.* This is part of our service to resellers who must have quick access to fresh stocks.

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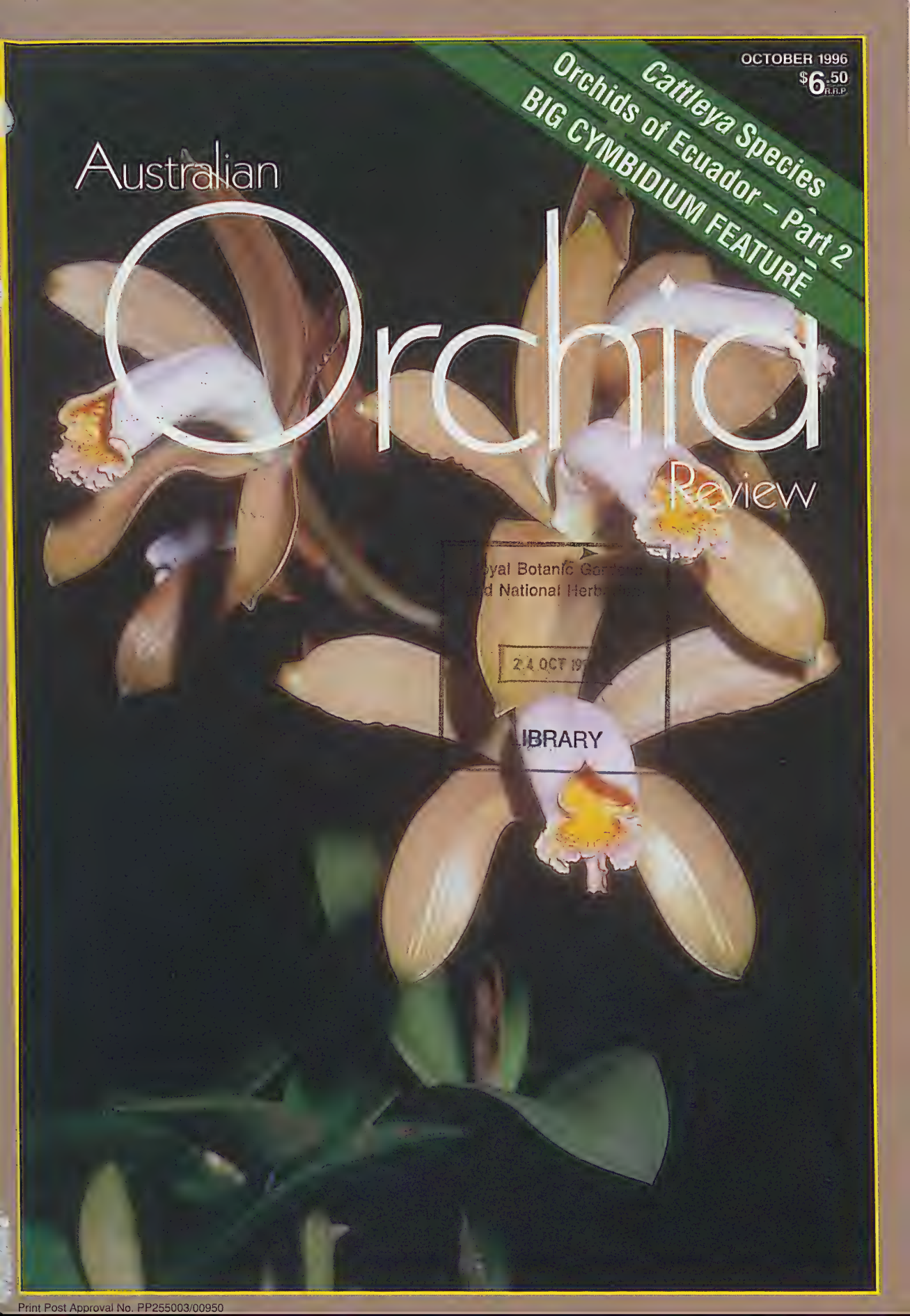
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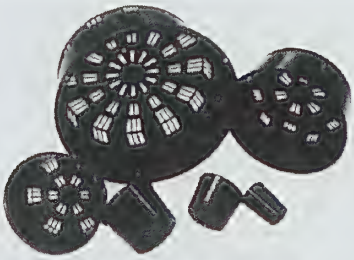
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Articles for publication should be sent to:

AOR Editor, David Wallace,
14 McGill Street,
Lewisham, NSW 2049
All other correspondence to:
AOR Publisher, Graphic World,
14 McGill Street,
Lewisham, NSW 2049.

Advertisers:

Deadline for advertising copy for the December, 1996 issue is Friday, November 1, 1996.

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Cattleya Species



Cattleya warneri – this reliable, easy-growing, spring-flowerer from Brazil is a good candidate for culture in cooler areas.

Flamboyant Flowers for all Seasons

Text and Photography by Robert Friend

Part 1

Cattleya trianaei was in full and glorious bloom last July. As I regarded its flamboyant beauty I reflected on how the *Cattleya* species are truely a gift from the Divine. To my mind no other orchid genus can match them for the sheer size of their blooms and their showy yet subtle colour combinations and contrasts. I think there would be very few of us orchid growers who, after seeing our first flowering *Cattleya* at close range, have not been moved to try growing at least one *Cattleya*. In my own case I remember vividly seeing Les Hawley's *Cattleya* house at St. Ives on Sydney's North Shore in the early 1950's. It was some 200 feet by 50 feet in the old measurements, glass roof on brick walls, full of flowering Cattleyas. What a majestic and glorious sight it was.

As presently defined the genus *Cattleya* comprises about 50 distinct species. The genus is a member of the subtribe *Epidendrinae* and is related closely to the genera *Laelia* and *Schomburgkia* in particular. It interbreeds freely with other members of the subtribe. There are now many combinations of genera making up intergeneric hybrids including the genus *Cattleya*.

Cattleyas are native to Central and South America. From their vegetative appearance Cattleyas fall into two types – the so-called unifoliate type with more or less club-shaped pseudobulbs each of which carries only one leaf and the so-called bifoliate type with usually longer flowering pseudobulbs each carrying a pair of leaves. The species of the unifoliate Cattleyas are found naturally in the mountainous regions of Colombia and Venezuela. The majority of the bifoliates are found naturally in Brazil.

GENERAL CULTURE

1. Light

Four elements are necessary for the successful cultivation and flowering of Cattleyas. These elements are light, air, water and temperature. A study of the orchid literature pertaining to Cattleyas in nature, discussions with growers who have visited natural *Cattleya* habitats and observation of plants which have been cultivated and flowered successfully lead to the inevitable conclusion that Cattleyas like and need good light at all times.

Thus, Dr. Fowlie (1) describing a particular habitat of *Cattleya walkeriana* in Brazil wrote that it grew in full sun on bare rock, although at an altitude over 1,500 metres where it received very frequent water from clouds, mist and rain. Again, describing a particular coastal habitat of *Cattleya intermedia* and *C. leopoldii* in Brazil, Dr. Fowlie stated that both were exposed to full sunlight the effect of which was modified to some extent by the very high humidity constant in the area. Carl L. Withner (2) describing *Cattleya* culture says the plants require ample light, needing shade only during summer and the brightest days of spring and autumn. J. Murray Cox (3) also describing *Cattleya* culture on the east coast of Australia some 50 years ago say light is the most important essential and continues "No *Cattleya* will grow sturdily and bloom satisfactorily unless it is grown in a place where it has good light at all times. If you grow them under glass (and this is not by any means essential – even so far south as Sydney), you should hang them so that they are as close to the glass



Cattleya aurea – its yellow colour and spectacular lip can be seen in its hybrid progeny.

as you can get them without scorching the leaves and even a little mild sunburn does not seem to do the plants any lasting harm, and, moreover, it appears to encourage them to flower."

We grow most of our adult *Cattleya* species in a shadehouse under 50% shadecloth. As a very rough rule of thumb 50% shade is a good starting point for your *Cattleya* growing area. If you plants look yellow, shrivelled and floppy they are getting too much light. Increase the shade. In Australia's warmer, drier areas away from the coast it may be necessary to use 70% or 75% shade cloth to prevent sunburn and dehydration of Cattleyas. Conversely, if your plants look lush and green with long leaves and pseudobulbs they may be growing in too much shade to allow them to flower to their potential.

Although our own orchid houses receive full sunlight from the moment the sun rises they lose the sun by about 3 p.m. in the winter due to a hill to the west. I believe that the number of hours of sunlight orchids receive is as important as the intensity of the sunlight. each grower's conditions vary from the next. It is up to each of us to study our particular conditions and modify them were possible and appropriate. Perhaps this might entail trimming a too-shady tree or building the garage on the south side of the block. If you are unable to modify your growing conditions then you must adapt your growing techniques accordingly. Perhaps you need to suspend your Cattleyas above all your other orchids to allow them maximum light and maximum hours of sunlight. Perhaps you could grow them outside the orchid house in the brightest part of the garden from spring to autumn.

Indeed cattleyas will grow very well outdoors in Australian gardens once the danger of frost has passed. They thrive suspended in the dappled light of an open-crowned tree such as a jacaranda, banksia or casuarina. They can be returned to a frost-free shelter as winter and the danger of frost approach. In summary, your Cattleyas will thank you with a bountiful display of blooms if you give them the best light for the longest period each day.

2. Air

All Cattleyas like air movement and dislike stale, close conditions. In nature most species grow exposed to all the breezes that blow, their only protection being the surrounding vegetation, if any. The process of convection by which warm air rises ensures that Cattleyas growing in mountainous regions are subject to air movement on warm days even if no actual breeze is blowing. As air from the lowlands heats up it rises causing air currents to waft through the ranges. We notice this effect when bushwalking in any hilly region in Australia. On a warm day pause on a ridge top, particularly at the head of a gully. You will notice a warm current coming up from lower down.

Why do Cattleyas (and most orchids) like air movement? There seems to be several reasons each of which is bound up with the orchid's health needs. Air movement dries up excess moisture. Cattleyas mostly live in regions of high rainfall. The mountain dwellers are subject to precipitation from clouds and mists. As temperatures fall in the evenings dew forms providing further moisture for the plants.. Breezes and convection currents prevent the plants from getting "wet feet". This driving effect caused by air movement assists in preventing the growth of fungi and bacteria which might harm the Cattleyas.

Air movement maintains the amount of humidity which Cattleyas enjoy. Whether a breeze blowing from the Pacific Ocean onto Andean Cattleya species, an Atlantic wind on the Brazilian coast or convection currents in the warm interior, moving air in *Cattleya* habitats is usually moisture laden. Air movement tempers the effect of heat and reduces the damage Cattleyas may otherwise suffer when exposed to very bright sunlight.

Cattleyas growing in the garden or in open structures such as shade houses usually have ample air movement around them. If your climate is such that you grow Cattleyas in an enclosed house then it is vital to ensure adequate air movement by the use of fans, ventilators and convection currents. Vigorous air movement allows you to reduce shading and to water your Cattleyas more effectively.



Cattleya porphyroglossa – a rare thin-stemmed Brazilian bifoliate species.

3. Water

The watering of any orchid must be the single most contentious subject in the whole field of orchid culture. J. Murray Cox hit the proverbial nail on the head when he wrote:

"As regards water. Reams of paper and gallons of ink must have been expended on this subject. The mistake that most commentators make is that they try to set out arbitrary rules for application in all circumstances. This is obviously impracticable. The amount of water to be applied to the plants in a Cattleya house must vary – (1) According to the nature of the house itself, (2) According to the atmospheric conditions prevailing in the house and in the open air outside, (3) According to the origin and condition of the particular plants themselves, (4) According to the type of potting compost and its container, (5) According to the season."

A few *Cattleya* species have a definite

period of dormancy in nature which we must duplicate in cultivation by keeping them dry during the corresponding period. I will mention several of these when describing some of the species. Most *Cattleya* species like to be watered year-round. The frequency of watering depends partly on those variables mentioned by J. Murray Cox and partly on what the particular Cattleya species may be doing at the time. Cattleyas which are growing, coming into bloom or are in bloom need more frequent watering than those which are not doing anything. Cattleyas like to be watered thoroughly so that they are drenched and the water freely runs out the drainage holes in their pots, then to become almost dry before being watered thoroughly again.

Cattleya seedlings grow continuously so generally should be kept damp and not subject to periods of dryness, at least until they are approaching flowering size. If you are in doubt about whether your Cattleyas are ready to be watered you might think of the old maxim about watering orchids which says: "If it is a *Paphiopedilum* you should have watered it yesterday. If it is a *Cymbidium* water it today. If it is a *Cattleya* leave watering it until tomorrow". All in all then, unless the weather is really hot, drying and windy with low humidity it is safer to err on the dry side rather than to overwater your Cattleyas.

4. Temperature

In very general terms Cattleyas like much the same temperature range that we do, becoming uncomfortable when the temperature rises much over 30°C or falls much below 10°C for extended periods. However, as Cattleyas inhabit such a wide range of habitats – from sea level to over 2,000 metres above it, from coastal scrubs to mountain rock faces to interior jungle clearings – the origin of each species should be considered in relation to its particular temperature requirements.

Our experience has been that the following species like more warmth than the others *C. dowiana, C. eldorado, C. lawrenceana, C. lueddemanniana, C. rex* and *C. violacea.* We try to keep these species at a minimum of 12°C during our short winter. Most of the other species will take winter temperatures down to 8°C provided they are kept dry during the coldest weather. This means providing them with some overhead cover, be it glass, plastic or fibreglass and protection from cold southerly and westerly winds with walls that exclude wind on those sides.

Remember, every orchid-growing area has a few different microclimates – some warmer, some cooler than others. Usually the warmest spots are near the roof so one way of ensuring your Cattleyas are in the warmest microclimate during winter, assuming you have an unheated orchid house, is to hang them as close to the roof as possible in the covered area of your orchid house.



Cattleya aurantiaca – 'Miami' – a bright yellow variety of this free-flowering cluster type.

Most orchids like a reasonable amount of humidity which provides them with two benefits. Firstly, as pointed out by Pabst & Dungs (4), orchids have the capacity to absorb moisture from the humid atmosphere. This capacity diminishes as temperature rise above 28°C or fall below 6°C. The optimum is said to be 21°C. Secondly, atmospheric humidity helps prevent evaporation of moisture from the plant.

Cattleyas like about the same amount of humidity as we do – about 60%. It is not usually a problem to maintain humidity on the east coast of Australia. When drying winds pull the humidity level down misting systems or damping down with a hose round the floor of the orchid house will build it up again. Humidity levels can be too high on those wet, cool winter days and nights. It is in those weather conditions that your Cattleyas will appreciate not being watered, being kept as warm as possible and with good air movement to dry up condensation.

Most *Cattleya* species and many hybrids have periods of dormancy when they are neither growing nor flowering. It is possible to grow and flower Cattleyas in cooler areas of Australia if they are types which have a dormant period during the cooler months. Perhaps the best types for cooler areas are those which flower in late summer and autumn. These grow through the warmer time of the year and do not have to carry flowers or new growths through the cooler time. Check the flowering time of your favourite *Cattleya* species to help you decide if you can handle it in your conditions. Ask the grower of that fabulous *Cattleya* hybrid which won Champion at your Spring Show whether it grew through



Cattleya aclandiae – a small plant with large flowers which grows well on rough-barked sections of wood or cork.



Cattleya warscewiczii – its massive lip and yellow "eyes" are its trademark. It likes a long, cool rest.

the winter or whether it had a dormant period then.

If it grew through the winter can you do justice to it in your conditions? Would you be better off concentrating on Autumn Show-winning Cattleyas which will grow and flower for you in the warmer months? The Brazilian genus *Sophronitis* is closely allied to and its species hybridise readily with Cattleyas and other related genera. The *Sophronitis* species are small growers. They impart cool tolerance to their hybrids. If you live in one of Australia's cooler areas and aspire to grow exhibition-type Cattleyas it is worth seeking out hybrids incorporating *Sophronitis*, particularly Sophrolaeliocattleyas (Slc's) and Potinaras. The former involves the genera *Sophronitis, Laelia* and *Cattleya*. The latter involves those three genera plus the genus Brassavola which includes a couple of popular species now classified for botanical purposes as *Rhyncolaelia*.

POTTING

Cattleyas can grow in a wide variety of materials. The most favoured medium for potting them is bark. Seedling Cattleyas like the smaller grades of bark whilst the adults prefer medium grades. Some growers add other substances such as charcoal, polystyrene granules or *Sphagnum* to bark. Whatever medium you use it is wise to under-pot Cattleyas rather than over-pot them. Choose a pot which allows for two years' growth placing the plant to be plotted with its newest growth towards the centre of the pot. Secure the newly potted plant by staking it to ensure it is firmly held in its new pot.

Before potting, old pseudobulbs in excess of three plus the newest growth can be removed with a sharp sterilized cutting tool. It is essential to sterilize cutting tools thoroughly either by soaking them in a sterilizing medium such as a saturated solution of Tri-sodium phosphate or 10% bleach (which will damage metal tools) or by heating them till they glow using a gas or spirit burner. This procedure guards against the spread of orchid viruses which are sometimes found in cultivated Cattleyas. Viruses are spread most commonly when the sap from an infected plant contacts a cut surface on an uninfected plant. As well as sterilizing cutting tools, if you divide your plants by pulling them apart it is essential to wash your hands and scrub your nails thoroughly before handling another plant.

When removing old pseudobulbs any old or decayed roots should also be removed and broken ones trimmed above the break. The ideal time to divide and repot Cattleyas is when a period of new root growth begins. With some *Cattleya* species and many hybrids derived from them this root growth period actually coincides with the end of their flowering period. Species such as *C.aurea, C. bowringiana, C. dowiana, C. gaskelliana, C. leopoldii, C. warneri* and *C. warscewiczii* produce new growths in spring which grow rapidly and flower as soon as the growths are fully mature. They then produce new roots from the base of the newly flowered growths as the flowering period ends.

The perfect time to repot these species, and hybrids which follow their growing and flowering pattern is just as the new roots emerge. Potting at this time ensures the new roots establish quickly in the new potting medium. If you handle the plant gently when placing new medium near its new growths the new roots will not be damaged because they are still very short. Once the new roots grow to about 2cm they are more likely to be damaged during repotting. At that length they are too short to form branches which longer, older roots are able to do. If you miss the chance of repotting just as the new roots emerge then it may be best to wait until the new roots are about 15cm in length as they are then capable of branching if their growing tips are damaged in repotting.

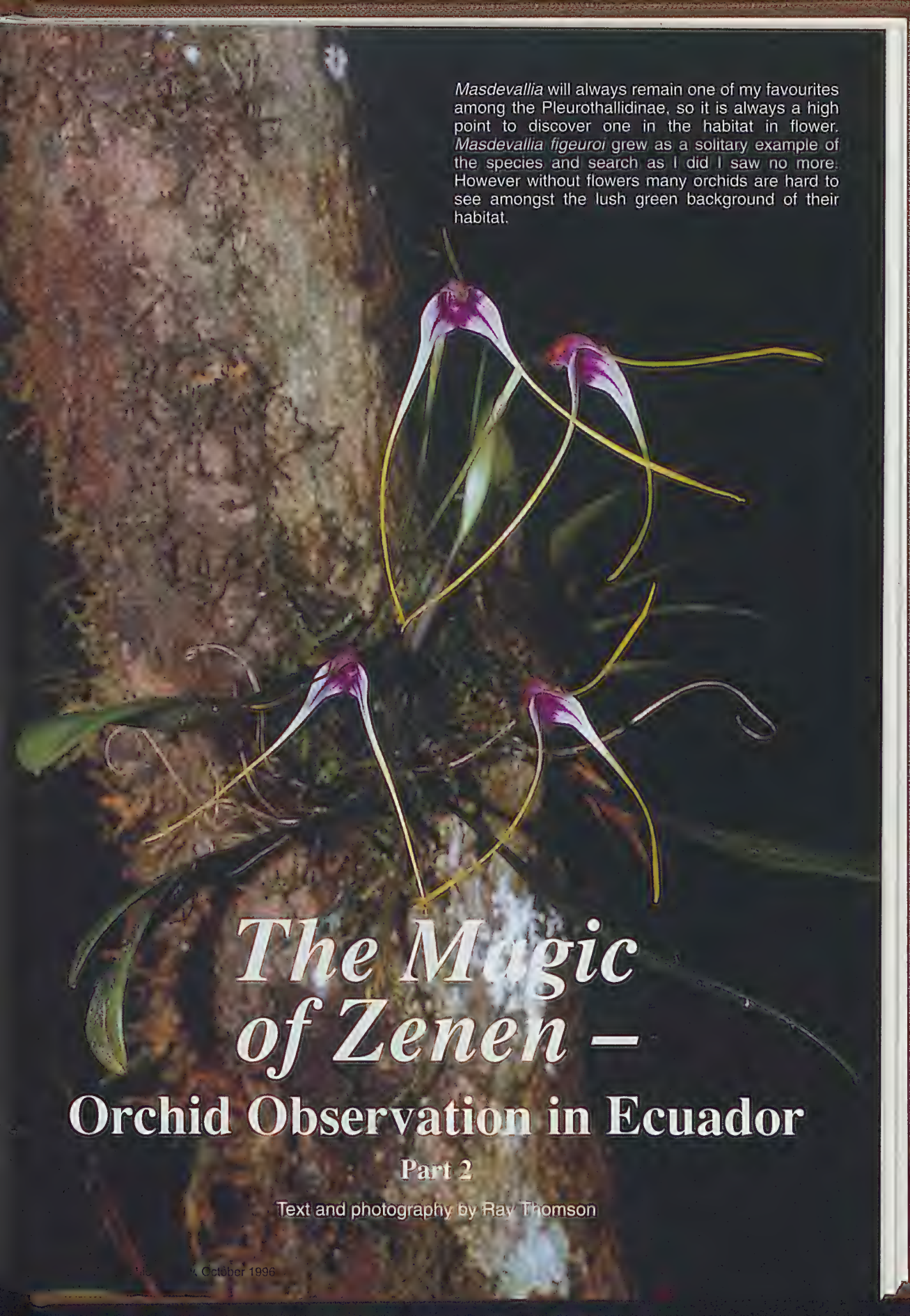
Some other *Cattleya* species and hybrids from them have a different growth pattern. Species such as *C. aurantiaca, C. guttata, C. mossiae, C. percivaliana, C. skinneri* and *C. trianaei* also produce their new growths in spring and produce new roots while the growths are maturing. As the growths mature they produce buds sheaths but then become dormant, sometimes for several months, until the next winter. These species usually flower from early winter to early spring, often from bud sheaths which have dried right out by then. The best time to repot these species and hybrids which follow their patterns is just as the new growths commence, usually in spring. This will ensure that newly emerging roots will not be damaged. Again, if the roots have grown more than 2cm before you get to them, leave repotting until the roots are at least 15cm long so they can branch if damaged.

We find that the warm-loving species mentioned in the section on Temperature do better if repotted in the warmer months, say from November to February depending on their stage of growth. They seem to resent being repotted in early spring. Repotting them after February may not leave them enough time to reestablish themselves before winter. We have also found that in our conditions some of the tall-growing bifoliate species including *C.amethystoglossa, C.elongata, C.leopoldii* and particularly *C.bicolor* must only be repotted when they start their new growths. When we have repotted these species during dormant periods they have just sulked, sometimes not growing for more than a year. For safety's sake it may be as well to repot tall-growing bifoliate hybrids only when new growth appears.

Cattleyas like and need to be fed when in active growth. Most fertilisers recommended for orchids are satisfactory, We prefer to use soluble fertilisers because they do not tend to clog up the bark potting medium we use, so much as the solid fertilisers do. We use high nitrogen fertilisers on our seedlings to keep them growing year-round. Read the instructions on your orchid fertilisers carefully. The usual suggestion is to use them at one half of the manufacturer's recommended strength. Feed Cattleyas only when they are growing, making roots or producing flowers and spend the money you thus save buying another plant. ■

● *Part 2 will feature in the December, 1996 AOR with a more detailed look at some of the species.*

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Orchids of Olympia
PO Box 856, Byron Bay NSW 2481



Masdevallia will always remain one of my favourites among the Pleurothallidinae, so it is always a high point to discover one in the habitat in flower. *Masdevallia figeuroi* grew as a solitary example of the species and search as I did I saw no more. However without flowers many orchids are hard to see amongst the lush green background of their habitat.

The Magic of Zenen –

Orchid Observation in Ecuador

Part 2

Text and photography by Ray Thomson

It had been dry in Ecuador for a long time, very dry, then at last it was raining, heavily and incessantly. Maybe, just maybe, those rain dances I did for the folk at San Antonio did the trick?

That morning, as we passed a developing mud and rock slide on the road to Loja, we remarked that on our expected return to Cuenca later that day, the road may be blocked. These slides are almost alive, you know, and as you stand there it is all silent but you are aware something eerie is going on.

Every now and then a small pebble or rock will roll down the slope toward the road, it's alive, this mass of mud and sand and as you look up, you know for sure that those huge chunks of rock perched precariously above, cannot defy gravity forever.

Our premonition was right; that night, the remainder of that treeless slope did come tumbling down, to block the road and our access back to Cuenca.

Stranded there, it was cold, raining heavily and at the same time, misty, but not lonely, as we had the company of many others also unable to proceed to their destinations. Now, as we waited for some sort of rescue to appear, was the time to reflect and make notes about the magic day just passed.

That morning on arrival at this place, not too far from Loja in the south of Ecuador and at an altitude of 2800 metres. I had no idea what to expect, although I have rarely been disappointed in my orchid expeditions in this country. The rough muddy track leading into the forest was speckled with blooming Gesneriads, Bomarias and Fuschias, all humming bird pollinated and a good sign that orchids are close.

Bromeliads were also numerous and as well, their presence announced that indeed, we were on the right track.

As we began the climb up the slope, the first orchids became visible, *Oncidium nubigenum* again, but with the largest flowers I have ever encountered in this species! Colours also were different to previous encounters, as these plants displayed beautiful pastel shades of mauve and pink. Pleurothallids of many genera, grew side by side with the Oncidiums.

I had previously only seen *Fernandezia* species illustrated and was always most impressed with the *sanguine* brilliance of colour. Was this just photographic enhancement?

Let me assure you that although small, but by no means microscopic, these plants, with their intense scarlet and blood red flowers, almost glow, such is the intensity, and as well they are visible from quite a distance. What incredible little charmers they are, these Fernandezias, in my opinion, rivalling the best of the *Dendrobium cuthbersoniis* (syn. *Den. sophronitis*) or *Maxillaria sophronitis*, for striking effect.

The genus *Fernandezia*, was established by Ruiz and Pavon in 1774 and so named in honour of Dr. Gregorio Garcia Fernandez, a Spanish medical doctor and a contemporary of Ruiz and Pavon.

The first encounter was with *Fernandezia sanguinea*. If I saw no other orchids that day, the expedition would be a success!

Fernandezia sanguinea can be identified by the more open and flatter flowers with a yellow perianth tube. Strangely this species cohabits with *Fernandezia ionanthera* with many instances of the two species growing side by side on the same moss and lichen covered twigs. No natural hybrid has ever been recorded, so obviously each species has its own specific pollinator.







Top: Before moving deeper into the forest at Zenen, the brighter light loving *Elleanthus* point the way for another great day of orchid observation. *Elleanthus purpureus* was one of three species noted at Zenen. **Centre:** Although growing in an area of low light level, I noticed *Fernandezia sanguinea* glowing in the distance maybe 20 metres away. One of the few monopodial orchids to be found in South America, it is a twig epiphyte. Observe the mosses, lichens and naturally damp conditions these orchids require. **Right:** I have pronounced this encounter with the Fernandezias the highlight of this expedition and was able to collect pods from this example of *Fernandezia sanguinea*, the seed of which is now germinating.







The root runs of both these monopodial species, are long, somewhat like *Sarcochilus falcatus* and *Sarc. australis* of Australia and this may be a factor associated with the reported problems experienced with the cultivation of *Fernandezia*.

Like other twig epiphytes, an unsustainable mycorrhizal association with the plants, may also be the key to the problems associated with a successful growing of this genus under artificial conditions.

However, I took a few plants back to Cuenca to experiment with cultivation. These plants were mounted on *Sphagnum* filled "Gutter Guard" or canary wire poles or cylinders. Some months later, growing on these mounts under the shelter of garden trees, the plants were growing strongly with flowers remaining in good condition for months at a time. I believe failures in the past, even here in Ecuador, have been associated with pot culture and this once again demonstrates, that air movement around the plants and especially at the root zone, is a critical factor.

Equally as important would be the constantly high humidity with coolish temperatures such as is always found in Ecuadorian Andean forests above 2500 metres altitude. Light levels were also constantly low at the growth site, yet *Oncidium nubigenum* and *Nanodes medusae*, grow and flower here profusely.

No less spectacular than *Fernandezia sanguinea*, is *Fernandezia ionanthera*. This species can be identified by the larger (for the genus) brilliant scarlet flowers with an unmistakable jet black spot on the tip of the column as well as a labellum of more cordate shape.

Another exciting find on this magic day was the discovery of a solitary plant in full bloom of *Masdevallia figueroi*. Search as

Top left: I have used this method of cultivation for smallish Pleurothallids with great success for many years. It was only natural to try it with the reportedly difficult *Fernandezia*. Months after planting on these poles, and placing in a sheltered garden position in Cuenca, (max. 26/27°C. min. 7/8°C.) the plants are growing and flowering well. **Top right:** No less striking is *Fernandezia ionanthera*, more scarlet in colour than *sanguinea*, but, just as desirable and this species also is growing well for us on moss/bird wire poles.

I did, I found no others, the reason being, and I reiterate, in these forests where cattle roam unrestricted, all and everything within their reach is consumed, thus, these days, most orchids are found high up, safe on their lofty perches . . . for the moment! Here, *Cyrt/Onc. macranthum* in full bloom grew as well, high up and out of reach, while down lower, a lovely large flowered *Pleurothallis phalangifera* commanded my attention.

It is always distressing in these forests, to find evidence of the indiscriminate felling of trees, which usually upon examination display a wonderful variety of epiphytes, which are doomed to either rot or be consumed. It was on one such tree that I found a colony of what appeared to be a variety of the rare *Epidendrum sophronitis*. While the flowers appear to be correct, the leaves are more linear and it may yet prove to be a similar, but different species.

Sure, I have seen and written of *Onc. nubigenum* previously, but, never have I seen this species with such large, as well as delicately coloured blooms. Nevertheless, an amazing variability was evident within the *Onc. nubigenum* population of Zenen, it grew here vigorously in the hundreds if not thousands, why? because thus far, only a small area within this habitat has been explored and exploited. Two of the colour variations are illustrated.

Once again, the Pleurothallids were the most numerous of all the genera observed and obviously many were undescribed.



Right: Every metre or so along the track I stopped to observe similar to this Pleurothallis, there are hundreds maybe thousands of different species, many so similar only the botanist's microscope can determine the difference. I love them all but the sheer brilliance of this orange beauty, stood it apart from many others on that magic day in Zenen. **Below left:** I love all Pleurothallis similarly, so this large flowered *Pleuro. phalangifera* was a welcome addition to what the forest of Zenen offered up. **Below right:** Three Odontoglossums were encountered including *Odm. polyxanthum.* (syn. *kegeljanii*), this fine example had excellent shape and deep vibrant colour.





Every 20 to 30 metres higher in these mountain forest habitats, we find a myriad of different species. No wonder there is such a huge backlog of new discoveries awaiting official naming and description.

One of the main reasons for these expeditions is the search for seed. When we search, and in this instance we were looking for material from *Nanodes medusae,* we normally enlist the assistance of a few of the local lads. This time it was no different and these boys defy your imagination as far as their climbing skills are concerned. As well, they display no fear of height.

From high above, in fact very high and out of sight within the foliage of a giant ancient oak tree, one of the boys came into view and held up something for us to see. What was it? From so far below, hard to say except that the flowers were of a pinkish mauve, a common flower colour in this place. As the young fellow began his descent with the plant, it became obvious what he was holding was something different, either rare or just maybe, unknown.

On closer examination, once composure had been regained after this excitement, all I could say was that this orchid had the habit and many of the features of the yellow/red brown *Oncidium abortivum*, the flowers, however, were nothing like that species and the two or three fully formed blooms occurred at the end of the flowering stem with the undeveloped or aborted flower buds to the rear.

The shape was more like that of an *Odontoglossum* than *Oncidium* and the flowering stems were strangely twisted, like a vine on contact with a twig or thin branch close by.

Later consultation with other orchid folk in both Cuenca and Quito failed to exactly identify the species I thought may be new, until talking with and showing illustrations to Harry Zelenko in New York. Harry had indeed seen this plant before and had even illustrated it for his soon to be published book on *Odontoglossum/Oncidium.* This orchid was, then, the rarely seen *Oncidium acinaceum.* Stig Dahlstrom from the Marie Selby research centre in USA, was later to confirm this from my photography.

Stig was also able to identify something else from this area that has also been something of a mystery. In fact he had discovered and named it just a few years before. This wonderful *Odontoglossum* was thought by local experts to be a most unusual and rare variety or sub species of *Odm. ramosissimum.* Stig once again came to the rescue, this was *Odontoglossum albo-roseum.* "That's my baby" an excited Stig exclaimed when he saw my slides. He had no photographic record of his exciting find, as all his drawings are done from dried or pickled flowers.

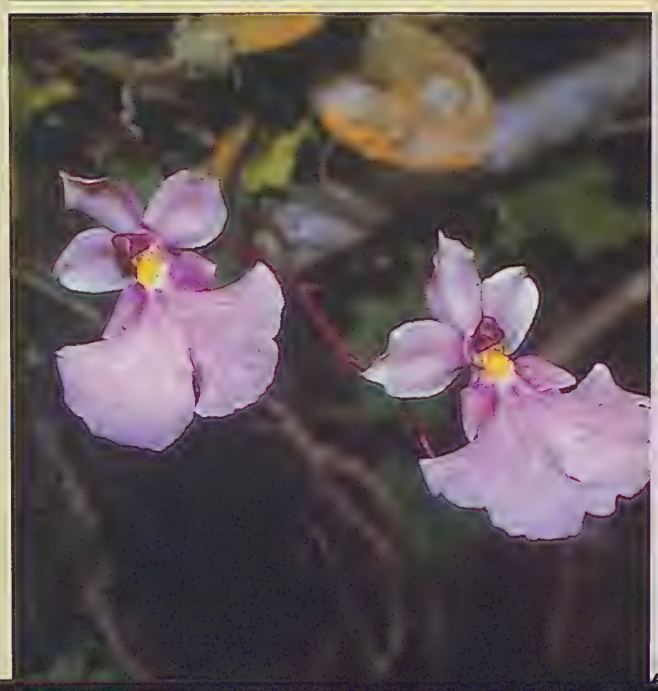
I found other Odontoglossums at this place as well. *Odm. polyxanthum* (syn. *Odm. kegeljanii*) grew as an epiphyte low down on the trunk of a tree, then close by and amongst the *Oncidium nubigenum,* fine specimens of *Odm. tenue* were encountered. You understand why I call this place magic!

This is all exciting stuff, but, remember we are in the Andes of Ecuador, where even today, new species are found on a regular basis. I have never made a visit to Ecuador, and I have made the journey more than a dozen times now, without saying on my departure that I have seen something new or at least very rare. Yes, the *Nanodes* was there as well in that fine old tree, but with all the excitement, I guess we just forgot about them.

Remarkably, by the time I had jotted down all these notes and







Top right: *Odontoglossum tenue* is often mistaken for *Odm. crinitum* and they are very similar. Both little gems, *Odm. tenue* at Zenen and illustrated, is without the thickly hirsute lip of its close cousin, *Odm. crinitum.* **Centre right:** Really, I had come to Zenen for *Oncidium nubigenum* and *Nanodes medusae.* Everything else in this orchid wonderland was a bonus and surprise. Still the *Onc. nubigenums* excite me. Two distinct colour varieties grew here and you need to make your own choice of preference. **Right:** Maybe you prefer this variety of *Onc. nubigenum.* Both variations grew together and I am happy to report I observed hundreds of healthy seedlings as well.



some hours had passed, the civil defence from Cuenca had arrived and with heavy machinery, the road was cleared. A journey normally taking 4 or 5 hours, took twice that and extended well into the night, but allowed me to reflect upon the magic just passed.

In the forest at Zenen, only orchids in flower were noted, nevertheless the list of genera and species encountered during just one day must be remarkable indeed. This is what we saw . . . *Masdevallia figueroi, Odontoglossum kegeljanii, albo-roseum* and *tenue*, at least three species of *Lepanthes*. *Epidendrum sophronitis*, a variety. *Oncidium nubigenum* along with several other unidentified *Oncidium* species. *Telipogon* species, *Nanodes medusae*, several *Encyclia* at least one possibly new, and Epidendrums as well.

The Fernandezias, *sanguinea* and *ionanthera*. Stelis species, some with huge flowers. *Pleurothallis* species including *phalangifera*, many with flowers larger than normally associated with this genus. *Barbosella* species, *Cyrt/Onc. macranthum*, many *Maxillaria* including *Max. nutans* and some interesting but minuscule flowered *Maxillaria* species. *Elleanthus* species and I am beginning to take quite an interest and liking for this often neglected orchid; at Zenen at least three species were observed.

Many terrestrials were also noted; quite a few in bud but no flowers. It seems I need to go back! No doubt I will, to Zenen, this magic place whose spell upon me is well and truly cast, and for me at least, a spell which will not be easily broken, even by landslides and torrential rain.

ECUADOR, SOME DISTURBING FACTS

On application, 52 hectares or 150 acres is available to every Ecuadorian rural family for agricultural purposes and activities. Evidence that the land is being worked or improved is required and the authorities here accept forest clearing and burning as proof of improvement. No wonder then, it is forecast that by early next century, if the current rate of destruction continues and without replanting, no native Ecuadorian trees will remain outside national parks and reserves.

As well, many orchid collectors illegally over-collect and market thousands of plants annually, from areas not under threat.

Many other pressures on the environment exist. Here, where the rural population can double every 20 to 25 years, it would appear there may be little hope of salvation for the incredible biodiversity of Ecuadorian flora and fauna.

It is estimated that Ecuador may have as many as 35,000 distinct species of plants, including orchids, of which as much as 35 to 40 percent remain unknown or identified. It takes but a few seconds to calculate, that as many as 16,000 plants await discovery and classification!

In the total Amazon basin, an area the size of Switzerland disappears to agriculture, including grazing, EVERY YEAR. At this rate within 100 years it will ALL BE GONE! Gone means extinct and from this state there can be no return.

In Ecuador alone, near 300,000 hectares or 750,000 acres of virgin rain/cloud forest is destroyed every year, both for short term agriculture and logging. Short term, because the Andean soils can be so thin and fragile, that within three years these thin but fertile soils may become non existent, or if anything remains, sterile.

At this time, mouths to feed appears to be the insurmountable problem facing those areas not yet destroyed and it will take a massive universal effort not to reverse, for that is impossible, but to stabilise what little remains. Maybe education in family planning as well as more modern and efficient farming practices would be a start for that stabilisation. If we are unsuccessful in this mission, our generation may be the last to experience the wonders of places like Piñas and Zenen.

Ray Thomson
Mooroolbark Orchids & Micro Propagation Centre
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Top left: One of two exciting finds in the area, *Oncidium acinaceum* created great interest among the local experts. Even though later identified, it still commands great interest as a rare *Oncidium*. **Right:** Undoubtably the prize, *Odontoglossum albo-roseum*, growing close to Zenen at 3200 metres, kept us guessing for many months until the meeting with Stig Dahlstrom, who identified it. I am concerned however, that I saw no seedlings or pods in the habitat. It is to be hoped this fine *Odont.* will not suffer the same fate as appears to be happening to *Cyrt/Odm. eduardii*. That is, extinction in the habitat.

Dendrobium macrophyllum A. Rich

Dendrobium macrophyllum has been described by Williams (1894) as "A fine and distinct species, perhaps more curious than beautiful, but so remarkable as to be well worth a place in collections". It is the most widespread of the Section *Latouria*, extending from the western end of Java to Samoa. It is present in most areas in this range, extending to the Philippines, Borneo, Sumatra, New Guinea, the Solomons, Vanuatu, New Caledonia and Fiji, but regrettably it does not occur in Australia. It is a variable species over this range, but the variation is continuous and only one variety other than the type, is currently recognised. This is variety *subvelutina* J.J.Sm. from West New Guinea.

This species was described by Achille Richard in 1834, which must make it one of the earliest orchids recorded from New Guinea. This specimen was collected on the voyage of the corvette *L'Astrolabe* under the command of Captain Dumont D'Urville, probably in August or September 1827. According to Chadim (1972) the site of the type collection was probably Manokwari near the extreme western part of the island of New Guinea. There is a quite lengthy list of synonyms as would be expected with a series with such a large range. The best known of these is *D.musciferum* which was described in 1907 by Schlechter on the basis of the flowers being closer together, the ovary and sepals being more densely hairy and the lip being different in shape when flattened out. However these differences are trivial when the total range of variation is considered and *D.musciferum* is now regarded as a synonym of *D.macrophyllum*.

D.macrophyllum is a large robust epiphyte of lowland forests extending from sea level to 1700 metres particularly between 500 and 1200 metres. It is one of the larger epiphytes in most forests forming large clumps with stems up to 60 centimetres long. There are usually three large leathery leaves at the apex, although occasionally more than three leaves are present and on small plants there may be only two. The closely related *D.polysema* can be distinguished as it commonly has two leaves. The flowers are three to five centimetres across, variable in colour, but with combinations of green, cream, yellow and purple. The sepals, ovary and pedicel are covered with dense hairs, however in the variety *subvelutina* there are only a few short hairs present. The racemes bear up to 25 flowers which last about two months. Flowering in Australia seems to be throughout the year, perhaps concentrated on late winter and spring. Plants flower when quite small.



D.macrophyllum – Photo: P. Lavarack

In cultivation this species is relatively easy to grow in tropical Australia. It grows well in a pot of bark or other free-draining mixture. It also does well on suitable host tree in the tropics and O'Byrne describes it as being grown in a raised bed of rock and fibre at the base of a tree. It requires watering throughout the year, but is best kept dry in cool weather. It requires a strong light to do well and should not be kept in a position where it will be continuously wet. The new shoots are produced very prolifically as with several members of the section *Latouria*, but are susceptible to rot which starts from water trapped in the bracts on the developing stem. Treatment with a suitable fungicide can control this problem, or care can be taken to keep water out of these bracts. It is a favourite of grasshoppers which will by-pass many other orchids to feed on the leaves and destroy the flowers.

Further reading

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- *Renanthera imschootiana*
- *Diplocaulobium aratriferum*
- *Maxillaria chrysantha*
- *Paphiopedilum haynaldianum* var. *album*
- *Angraecum didieri*
- *Acampe ochracea*
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Paphiopedilum haynaldianum var. *album*

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AOR 037

Orchid Society of New South Wales

The OSNSW held a very successful show in June 1996.

Many thanks to Roselands Shopping Centre for sponsoring this show as they have done over the past twenty years.

Grand Champion was *Paphiopedilum* Tommie Hanes 'Althea' – W. Hughes.

Reserve Champion was *Dendrobium* Karsun 'Yellow' an Australian Native Hybrid – D. Wood.

Champion Paphiopedilum *Paph.* Tommie Hanes 'Althea' – W. Hughes.

Champion Novelty Paphiopedilum *Paph.* Holdenii 'Jacs Queen' – R. McCue.

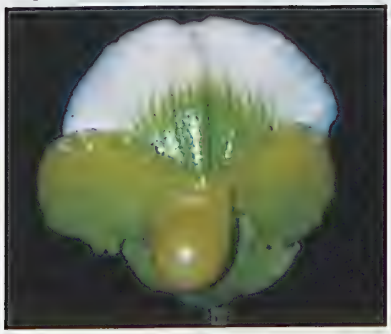
Champion Paphiopedilum Species *Paph. venustum* var *alba.*

Champion Standard Cymbidium Hybrid *Cym.* Poetic Winter 'Carolyn' – I. Maclure.

Champion Intermediate Cymbidium *Cym.* Bewitched Baker x *Cym.* Lancashire Rose – N. & J. Schaefer.

Champion Miniature Cymbidium *Cym.* (Beacon Fire x Greenoaks Gem) x Pink Peach – N. & J. Schaefer.

Champion Laeliinae Hybrid *Blc* Sylvia Fry 'Supreme' – D. Bird.



Paph. Tommie Hanes 'Althea' Grand Champion and Champion Paphiopedilum. Was granted a AM/NSW – W. Hughes. *Photo: B. Long.*

Champion Vandaceous or *Phalaenopsis* Hybrid *Ascda.* Hawiche x Pimsai – J. K. Irvine.

Champion Oncidiiuae Hybrid *Oncidiinae* Tropic Tiger No. 1 – D. & V. Taylor.

Champion Orchid Not Specified *Lycaste* Henty x Macama – Barrita Orchids.

Champion Exotic Species *Liparis condylobulbon* – D. Banks.

Champion Australian Native Species *Den. bigibbum* var *compactum.*

Champion Australian Native Hybrid *Den.* Karsun 'Yellow' – D. Wood.

Champion Seedling *Cym* Lady Angela 'Tiara' – G. Bryant.

Champion Orchid Exhibited by Novice/Junior *Cym.* Trigo Royale x Angelica Advent – P. Vahtuvant.

There were nine displays in Class I which was won by Sutherland Shire Orchid Society Inc.

The Pre-eminent Entry the AOC Certificate was awarded to Western Suburbs Orchid Society for its display in this class. Each plant in this display was wrapped in aluminium foil and cellophane setting off all flowers. When first viewed the reaction was one of surprise but it softened and grew on you with more critical viewing.

Class II was won by Orchid S.P.E.C.I.E.S. Society. The commercial display was won by Royale Orchids.

In the groups of four *Paphiopedilum* 1st and 2nd went to Frank Dobell.

Many thanks to the affiliated societies and all those who helped with security and sales on a very successful table and show.

W.F.

Gosford and District Orchid Society

Gosford and District Orchid Society held its Winter Show from the 16-22 June 1996 at Market town Shopping Centre in Gosford.

We were very satisfied with the response and the high quality of the exhibits which were well presented and a credit to our members.

The display was a blaze of colour and perfume from the blooms with a wide variety of genera on display.

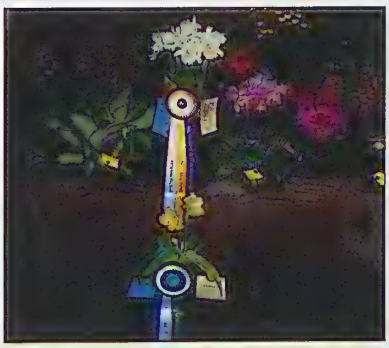
Grand Champion Orchid of the show was awarded to a *Cattleya* 'Pastoral Innocence' exhibited by Rob Palmer displaying six magnificent snow white blooms.

Reserve champion also went to Rob Palmer with a delightful *Paph.* Coromandel 'Bunny'.

Champion specimen was *Onc.* Bic Rossii 'Wendy' owned by Kevin Kelloway which was a picture to behold.

Out thanks go to Market place, the local businesses and our members who put in so much effort into making our show such a success.

John Phillips



Top: Grand Champion *Cattleya* 'Pastoral Innocence'. **Below:** Reserve Champion *Paph.* Coromandel 'Bunny'. Both orchids exhibited by Rob Palmer.

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Far North Coast District Orchid Council

The Far North Coast District Orchid Council (N.S.W.) held its Annual Winter Show at Lismore Square Shopping Centre 20th, 21st and 22nd June, 1996.

This Council is an umbrella group that covers Societies from Coffs Harbour and



A selection of plants on display. *Photo: Graham Gamble*

Bellinger Valley in the south to Tweed Heads Orchid Society to the north, so naturally you would expect to see some of the best orchids in Australia on display, and the Show did not let you down.

Beautiful phalaenopsis, cattleyas, slippers and vandaceous were among the excellent genera on display as well as a mixed variety of dendrobiums. In fact two plants were awarded H.C.C.'s. *Paph.* Macabe (*sukhakulii* 'Muscles' x Voodoo Magic 'Incantation') owned by June and Noel Heyden. This plant was also the Reserve Champion of the Show. The other plant to be awarded an H.C.C. was *Blc.* Chincogan 'Sandra' owned by Gordon Vallance of Mullumbimby. This was an outstanding white and truly deserved its recognition. Grand Champion went to a *Phalaenopsis* also grown by June and Noel Heyden. *Phal.* Polar Bear 'Tinatoo Pde x Sylvania Fair' 'Doris Lanyon'. Perfection is the only word to describe this magnificent specimen. Congratulations go to Noel and June on their wins. Also to the Far North Coast District Orchid Council for the quality of all the plants on display. Thanks must go to the management of Lismore Square Shopping Centre, for not only providing space but also for the very generous donation that more than covered all prize money.

Peter Edwards

The Eastern Suburbs (Sydney) Orchid Society

The Eastern Suburbs (Sydney) Orchid Society presented its traditional Members Winter Show between the 16th and the 22nd June, 1996, this year for the second time at the ever popular Bondi Carousel Shopping Centre. Set-up was late on Saturday the 15th June. The artistic arrangement of the Show was conducted jointly by Judith Nair and Steven Astill. The Show was open only to financial members of the Society who contested twenty classes for open members and thirteen classes for novice members. As well, there were nine champion divisions which included "Grand Champion of the Show" and "Reserve Champion of the Show".

Paphiopedilum was the genus which formed the back-bone of the exhibition, many, many plants being displayed by Steven and Leila Astill, with many more exhibited by Norm Chaney, who incidentally has been exhibiting successfully since the Sydney Town Hall days of the Sixties. This genus alone had three classes for competition and ultimately provided the Grand Champion of the Show.

David and Stephen Lee exhibited a great variety of orchids over many sections, including hot house vandas and three exquisite *Ascocendas*, two of which were fire-engine red, *Ascda.* Fiftieth State Beauty *Ascda.* Meda Arnold and *Ascda.* Pisawong. Also of particular note were several superb plants in the *Odontoglossum* Alliance exhibited by Alex Aleksic, one of these, *Ondontioda* Pescoelyn was not only the Champion Novice orchid but a very deserving Reserve Champion of the Show.

The Society conducted a guessing competition and a very, very busy sales table throughout the eight days of the Show. The majority of the plants offered for sale were cymbidiums in flower and three such orchids comprised the three prizes for the guessing competition. However, it was interesting that cymbidiums did not form the back-bone of the Show.

Because of the many small terrace houses, flats, and bed-sits in the inner city, the Society has always has as one of its classes, miniature orchids. This section as usual was hotly contested. The winning plant was *Dendrochilum formosanum* exhibited by Les Forster. Of special interest were four different dendrobiums from the moist highlands of PNG exhibited by several members in the Asian Species section. They were *Den. cuthbertsonii, Den. pentapterum, Den. cyanocentrum* and *Den. laevifolium.* Grand Champion of the Show was *Paph.* Brewangle 'Chisia' exhibited by Norm Chaney and Reserve Champion of the Show was *Odontioda* Pescoelyn exhibited by Alex Aleksic.

Bernard Cooley
Show Marshall

Shoalhaven Orchid Society

The recipe for show success is one where all the ingredients are added in correct proportion at the correct time and this year we were fortunate to have a correct mix. The weather was satisfactory, both plant quality and numbers increased and the attending crowd showed a significant increase on last year. A willing band of workers added to the event.

A pleasing feature was the arrival of forty members of the Orchid Society of Wagga Wagga who made our show the feature of their annual bus trip. Another point worthy of mention was the comment by two members of a Sydney society who made a 350km round trip because at this show held in a hall, they are not

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limited to view the plants from behind the protective ropes necessary in a shopping centre.

Novice Champion went to *Burrageara* Living Fire 'Glowing Embers' grown by Ross and Noel Westley. The name says it all as the colour is as red as glowing embers. This plant was one of the wide range of growing competition plants introduced by the society in recent years and the benefit is now apparent in the variety shown by members at our shows. Champion *Paphiopedilum* went to Steven and Leila Astill for Paphiopedilum Hanes World 'Northville'. A well grown plant from the spotted class, this clone exhibited the features most growers look for in a complex hybrid, with well rounded petals, a full dorsal with clear spotting and a ventral sepal providing a good outline, the pouch giving a good over-all balance.

Champion Native/Native Hybrid was awarded to *D.* Tully x *D.* Graham Hewitt. A most attractive flower with rich rose coloured blotches overlaying a very pale pink base. Of good size and shape this plant exhibited a trait shown by all good orchids. The ability to display its flowers to best effect on a semi-arching raceme. Grown by John Apperley whose efforts dictate a mention in dispatches at most shows.



Champion Native/Native Hybrib. *D.* Tully x *D.* Graham Hewitt – J. Apperley. *Photo: Alan W. Stephenson.*

Champion *Cymbidium* and also Reserve Champion went to Frank and Pat Bowyer with a very good clone of Cymbidium Via Del Playa 'Yvonne'. A dozen flowers of light pink on an upright raceme justified this win. Frank and Pat are consistent exhibitors at meetings and shows of clean well cultured cymbidiums and have established well since moving from Albury.

Champion Orchid Of The Show and Champion Any Other Orchid was won by Ray Tucker with the colourful species, *Rhyncostylis gigantea* 'R & R'. This is only the second time I have seen this plant exhibited and on both occasions it has taken out the major prize. An arching raceme of 25mm white flowers attractively endowed with rich purple spotting and an all purple labellum.

Those listed above are the major winners but the class prizes were spread very well across all those who entered in both Open and Novice classes and thanks must go to all contributors both on and off the show benches.

It never ceases to amaze how time consuming the setting-up of a show can be. Much of the day prior used to erect tables, place plants in sections, check this, check that and 45 minutes after closing time the venue has been stripped of plants, floor swept, lights out, door locked and that's all folks until Spring. But then the Spring Show is only eight weeks away.

Alan W. Stephenson
Publicity Officer

Stawell Orchid Society

The Masonic Hall, Skene Street, Stawell was the venue for the Stawell Orchid Society Winter Show, on Friday August 2nd. The show was part of the monthly general meeting and the cold and blustery winter's night did not discourage over 70 members and visitors from surrounding orchid clubs and Melbourne from attending and being pleasantly surprised by the profusion of colour throughout the hall.

Winning plants were awarded 21 sashes and members exhibited in the Novice, Intermediate and Open sections. Over 120 plants in 16 genera were represented and this was an excellent effort for this time of year. Judging was under the auspices of the Victorian Orchid Club and favourable comments were made on the high standard and variety of genera which members presented for judgment. Stawell Orchid Society will celebrate its fifth birthday in October this year. This is quite impressive as the quality of plants shown was indicative of the progression of the club in this short time.

Cymbidium One Tree 'Doris' which was owned by Peter and Lois Williams won The Most Pre-Eminent Entry at the show and it was also awarded the Australian Orchid Council certificate for this section. All spikes featured well above the foliage and the five bright yellow spikes all had flowers to equal form.

Paphiopedilum Rosewood x Songbird (a red complex hybrid) was Grand Champion and it had three well formed flowers which presented themselves beautifully and was owned by John and Barbara Welsh.

Lycaste Macama 'Aline' won Reserve Champion and this plant was also owned by John and Barbara Welsh. Displaying several pretty pale pink flowers of high quality, it was quite a sight to see. Both plants were very well cultivated.

The many other major prizes, too numerous to mention here, were much appreciated by the recipients and all should be proud of the standard achieved, considering the short time some of them have been growing orchids

The club is now making preparations for their Spring Show which is to be held on October 5th and 6th.

Lois Williams
Publicity Officer

Sunraysia Orchid Club Inc.

The Sunraysia Orchid Club Inc. held the 1996 annual winter show at our new venue, the Greek Orthodox Church hall in Deakin Ave. on the 20th and 21st July. Typical to Mildura, the weather, once again was made to order, brilliant sunshine both days.

Deane Johnston, our club patron attended as Chief Judge, ably assisted by our own judges panel of Brenda Lynch, Jay Ashworth and Carol Sanderson. Deane was accompanied by wife Jenny and son Glen, visitors came from far and wide and 32 members of the Orchidaceous Society of South Australia visited our show, participated at our annual Winter Show dinner and took in some of the tourist attractions of Sunraysia.

The show and dinner were both extremely successful. One of the wonderful things about an Orchid Winter Show is all those beautiful flowers and colours when nature outdoors looks dull and bleak



Grand Champion *Den. teretifolium – Eric Bailey.*

Grand Champion of the show was a magnificent specimen of *Dendrobium teretifolium,* the plant grows on a 15cm (six inch) diameter piece of iron bark tree about 150cm (five feet) tall and carried 600 plus pristine white flowers., The same plant also won Champion Australian Native and Champion Species. The plant is grown by Eric Bailey, a member of our club. He has owned the plant for ten years. I estimate that it would be 30 plus years old. The same plant won the Winter Show Grand Champion four years ago. Eric is a second division grower!

Champion standard *Cymbidium* Cronulla 'The Khan' grown by Fred Stein and Nola Attwood. The same growers also received the ribbons for Champion Miscellaneous Genera and Champion Seedling (other than *Cymbidium*) with a first flowering *Odontoglossum crispum* crossing.

Champion Intermediate *Cymbidium* and Champion *Cymbidium* Specimen was taken out by a bright golden yellow Mimi Dream 'Gold Sovereign'. The plant carried 12 spikes each with 20 plus flowers, a spectacular specimen grown by Ted and Wilma Symes.

Champion *Cymbidium* seedling, a Pendragon Broodmore Claude Pepper crossing, grown by Ray and Audrey Tschirpig.

Champion Miniature *Cymbidium*: Sarah Jean 'Barrita'. The plant carried 11 well presented spikes and was grown by Robin Berry, also a 2nd division member.

Champion *Cattleya* and Allied Genera won by *C.* Esbett *Lc.* Bonanza Queen, grown by Keith McCullach, again a 2nd division member.

Ted and Lorraine Roberts, also 2nd division members took out Champion *Paphiopedilum* with *Paph.* Caraibe.

It must be most pleasing to new Orchid Club and Society Members to see many divisional Champions going to 2nd division growers.

Displays within our club have been improving with each show over the past few years, and we are now up to metropolitan standards.

Happy growing to all our friends in other Clubs and Societys.

Fred Stein
Sunraysia Orchid Club

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

Gold Coast-Tweed Orchid Fair Update

Our Committee has again limited stall-holders to 22 nurseries and suppliers from south-east Queensland and northern NSW, selected with variety and quality in mind.

These suppliers include:–

Aranbeem Orchids, Banana Coast Orchids, Coral Belvedere Orchids, Coral Anderson Orchids, Florafest Orchids, Fong Ping Orchids, Jodi's Nursery, Horticultural Solutions, K & H Orchids, Orchids by Olympia, Orchid Enterprises, Orchidaceous Books, Oz Orchids, Pacific Orchids, Robertson's Orchids, Saunders Orchids, Savoy Orchids, Tinonee Orchid Nursery, Valley View Orchids and Viking Shadehouse, Orchid and Garden Supplies.

The venue the **Tweed Heads Civic Centre**, cnr. Wharf and Brett Streets, Tweed Heads, has been chosen for its very good, spacious display area and for its almost unlimited free, off-road parking.

Light refreshments can be purchased on site.

The weekend of 2nd-3rd November, 1996 was selected so that it does not clash with Society Shows, etc and indeed provides a welcome 'filler' to an otherwise slack period.

The Tweed District Orchid Society will be co-ordinating a Judged Orchid Show.

Entry is FREE and Bus Trips by Societies are welcomed.

For further information please phone on 07 45573 1924 – Wal Murphy, Co-ordinator.

Burnley Home Gardener's Summer School is on Again

The great response from gardening enthusiasts to the first Burnley Summer School for Home Gardeners held in February this year has assured the return of this once regular event to the Victorian gardening calendar.

The 1997 Burnley Summer School for Home Gardeners will be held at the University of Melbourne from 4th to 7th February, 1997. Residential accommodation will once again be available at Newman College.

Burnley College has maintained the tradition of putting together an outstanding panel of speakers who can provide practical and entertaining advice on a wide range of subjects of interest to the home gardener. No other event offers the opportunity for home gardeners to meet, question and learn from some of Australia's leading garden authorities.

Highlights of the 1997 Summer School will include Jane Edmanson on growing plants in confined areas, David Ruston on the David Austin roses and Judy Horton on vegetable growing. David Young, Canberra's leading gardening authority, will head up a panel of experts to answer questions on the final day of the school and also present a session all about bulbs. Talks from James Wall on plants in containers, Judy Winstanley on plants for both sides of the street and Teena Crawford on selecting plants for shady spots are other features. Ted Poynton's points on gardening will save time and money. Sessions from regular Summer School presenters John Patrick and Ivo Dean are included in the program and the Principal of Burnley College, Greg Moore, wil reveal some other aspects of the secret lives of plants.

A day trip to Mt Macedon to visit heritage gardens and Stephen Ryan's Dicksonia Rare Plants nursery is included in the program.

The whole event will be compered as usual by well known horticulturalist, Neil Williams.

This is an event not be be missed by either novice or expert gardeners. Summer school is for everyone, it provides a great opportunity for home gardeners to meet fellow gardening enthusiasts to learn about their hobby and at the same time enjoy a holiday in charming surroundings in the heart of Melbourne at a most reasonable cost.

The beneficiary of any surplus funds from the school will be the educational programs of the University of Melbourne's Burnley College.

For further information contact Bridget Patrick on 03 9853 2087 or Burnley College on 03 9250 6800.

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The Sydney Showgrounds Go Green with new look Garden Show

The RAS Showgrounds will be transformed into a magical landscaped extravaganza of plants, trees and flowers for the 2UE Garden and Flower Festival '96, October 11-13.

Organisers Riddell Exhibition Promotions have appointed landscape architects Pittendrigh, Shrinkfield & Bruce to create a true gardening show-case for the gardening industry. This amazing environment will profile everything necessary to create the perfect outdoor escape including new gardening tools and products, flowers and shrubs, nurturing techniques, outdoor furniture, fencing, pool and landscaping equipment.

On arrival visitors to this year's show will walk down a tree lined boulevard into a rich and continuous harvest of foliage and flowers with displays from some of Sydney's top nurseries and specialist plant and flower retailers.

An outdoor cafe nestled in the middle of these special display gardens will provide a little New Orleans magic with a 3-piece string trio playing background music from Dixieland jazz to classical for the enjoyment of visitors as they sit and plan their own garden.

Of course, Phil Halderman and Shirley Stackhouse will be there live each day from the showgrounds for 2UE. They will be joined by other high profile 2UE personalities.

The Hall of Industries will provide a centre stage for an on-going program of do-it-yourself seminars covering everything from floral art, designs for low maintenance gardens and plant selection.

The show coincides with the annual spring festival of the Royal Horticultural Society and the Orchid Society of NSW and they are planning to stage their biggest floral show to date. With prizes in several categories, not only can the public admire the splendour of these delicate blooms but also the talents of these dedicated growers.

Landscape Contractor Association and TAFE have taken up the challenge to create this 'new look' show.

"A huge amount of resources have been committed to create this horticultural extravaganza", says Mark Kewley from Riddell Exhibition Promotions. "To date Sydney has not experienced a true gardening show of the calibre of the highly successful Melbourne Flower and Garden Show."

Just as Puppy generated a lot of publicity and interest at Sydney's Circular Quay, Kewley predicts this year's 2UE Garden and Flower Festival '96 will create similar interest and enthusiasm with the public as they make their way to the RAS Showgrounds to enjoy Sydney's most ambitious and extravagant garden show.

The Sydney Children's Hospital are the official charity for the show and they are looking at creating a special centre attraction at the show to highlight their involvement and raise money.

"The show is targeted to everyone who enjoys life beyond the back doors and will provide an opportunity for visitors to meet and chat with Shirley and Phil", adds Kewley.

Bring your gardening gloves and don't miss this blooming show! Admission is $8.00 adults, $5.00 pensioners and children under 16 are free. The Show is open 9.00am to 6.00pm daily.

For further information: Lynne Phillips & Assoc Riddell Exhibition Promotions. Phone (02) 9968 1866, (02) 9565 1099.

Australian Inland Championship Orchid Show

The Albury-Wodonga and District Orchid Club will stage the Australian Inland Championship Orchid Show on Saturday 5th and Sunday 6th October 1996. All setting up will be completed on Friday 4th October 1996.

This year the Orchid Show will be staged in the very prestigious Albury Convention Centre.

As well as benched orchids and displays of orchids, there will be sales and exhibitions of equipment, supplies and plants which will assist growers and gardeners in general.

An information table will have knowledgeable Orchid growers, supplying information, books of reference, as well as books and fertilisers for purchase — *David Marsh, Co-ordinator.*

Cymbidium Congress

The 22nd Annual Cymbidium Congress of the Cymbidium Society of America will convene Saturday, March 8, 1997, at Fess Parker's Red Lion Resort, 633 E. Cabrillo Blvd., Santa Barbara, CA. The Cymbidium Congress will be concurrent with the 52nd Santa Barbara International Orchid Show and the 1997 Spring American Orchid Society Trustees Meeting. The combined programs will make this a world orchid conference class event. Contact: Grant Cole, PO Box 1122, Whittier, CA., 90609-1122, telephone (310) 947 5233 for a registration brochure with more information – *Grant Cole, Chairman.*

Gardenesque

A unique 2-day garden festival at Historic Rouse Hill House will be held on Saturday and Sunday 26-27 October 1996.

Gardenesque '96 is a unique two-day garden festival to be staged at the historic rural property of Rouse Hill House, Windsor Road, Rouse Hill (half-way between Parramatta and Windsor).

Presented by the Historic Houses Trust of NSW, this is an unusual opportunity for people to experience and explore Rouse Hill House and its twelve hectares of gardens, paddocks and farm buildings, while investigating the latest products and information on Australian gardening.

Over 4000 people are expected to attend this two-day gardening event with 50-100 exhibitors marketing and selling their services and products.

Highlights of Gardenesque '96 will include:

- a Sunday afternoon auction of 19th and 20th century garden and verandah ornaments and sculpture, garden furniture, gardening tools, pottery and miscellanea by the prestigious Phillips International Auctioneers.
- 50+ exhibitors around the house and grounds
- Devonshire Teas and family fare in the gardens
- continuous tours of Rouse Hill House and its many outbuildings.
- activities for children including hay rides and a petting zoo

One of Gardenesque '96's major attractions will be the opportunity to visit Rouse Hill House as public access to the property has been limited in the past.

Please call the Rouse Hill House curator, Michael Bogle, on (020 9627 5108 or fax (02) 9627 3184 for further information.

Midland Spring Orchid Show

The Midland Orchid Society Inc. will be conducting their Spring Orchid Show at 'Skydancers' Orchid and Butterfly Gardens, Cnr Midland Highway and Blackjack Road, Harcourt on: 18th, 19th, 20th October, 1996.

There will be a magnificent display of orchids in bloom. There will also be orchid plants for sale and people available to answer any questions you might have concerning orchids.

The Committee and Members of the Midland Orchid Society would like to extend an invitation to all interested members of the public and orchid growers to come along for a pleasant day.

For further information, please contact Mr Max Haywood (054 43 6530) or Mr Gary Sobey (054 74 2468).

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One aspect of our hobby that has always been uppermost in the grower's mind is propagation, that is the encouragement of reproduction of our plants either by sexual or asexual techniques. Asexual reproduction has long been practised with orchids, but until Lewis Knudson published his first paper in 1921, seed germination consisted mainly of the hit-or-miss procedure of sprinkling seed around a parent plant. (It should not be forgotten that this is still a useful technique for the hobby grower who is seeking a few extra plants, particularly of terrestrial genera.)

In 1941 the A.O.R. carried several articles which provided information relevant to propagation. Dr. D. A. Herbert contributed a piece, "Sex in Orchids", which carefully described the structure of the orchid flower, in particular of the male and female sex organs, and explained how it was pollinated both in nature and by man.

A detailed communication entitled "Symbiotic and Non-Symbiotic Propagation of Orchids from Seed" set out results achieved by a Melbourne group of three, who followed along the lines of worker in U.S.A. Commencing with an explanation of symbiosis and the role of the fungus, the method of isolation of the fungus was given, followed by the process of inoculation of the medium with fungus and orchid seed. the non-symbiotic method was then described, followed by instructions on removal of plants from the flask through to the final potting of the seedling. Other subjects discussed were composition of the media, role of carbohydrates, the importance of pH and its determination and control, difficulties encountered in maintaining sterility, and the influence of day-length on seedling growth rates.

I was interested to learn that even after asymbiotic germination, there can still be a role for the fungus. To overcome the check to the growth of small seedlings often encouraged on transfer from mother-flask to compost, it is suggested that a flask, "containing a prepared compost which has previously been inoculated with the appropriate fungus", be interposed for a period of 4-5 months. It was found that the seedlings made better progress and, further more, suffered practically no check when finally transferred to a pot of ordinary compost.

I think it says much for Australian horticultural science that work of this nature was being undertaken here, within twenty years of Knudson's paper.

Under the heading "Vegetative Propagation", Percy Gilbert submitted an account of methods that an amateur may use to multiply the more commonly grown genera. He described in detail methods that are still used today whereby plants can be divided by cutting, or whereby plantlets can be removed from matured plants. He advised that Paphiopedilums may be divided into two or more plants by cutting the plant, as may members of the Cattleya alliance. Members of the subtribe Vandeae maybe similarly divided by cutting off the top two-thirds of the sympodium with its aerial roots and potting it. Cymbidiums may be increased by severing green back-bulbs, which may be left in the same pot until repotting time. The genus *Dendrobium* offers more scope than most genera, being freely propagated by plantlets known variousley as "offshoots", "aerials" or "keikis". Gilbert advised that plantlet production may be encouraged by heavy root watering and high temperature and humidity, or alternatively by detaching the old pseudobulbs which can then be left in the pot or rested on wet *Sphagnum,* so that in either case aerials will develop.

A question that I am often asked is, "when should one remove aerial growths from the parent plant?" Gilbert discussed two alternatives: 1) detach as soon as roots are 12mm in length, or 2) leave until the following spring. He summed up the pros and cons of each as follows: 1) early removal releases the strain on the parent, but growth is slower and more likely to fail, and 2) later removal strains the parent more, but the growth is stronger so that is should soon get flowering size if it is not removed until roots appear from the second shoot, and also it will have a reserve it the new shoot should damp off.

My answer has always been "don't remove the aerial until there are roots coming on the second cane".

"Does Nature Rest in Propagating?" is the title of a submission which maintains that nature takes a rest at regular intervals. That angiosperms do not flower every year is common knowledge, and orchids are no exception, but can we accept the author's assertion that orchids take a rest period from flowering every sixth year? I rather think not, for there are many factors involved here, and when I appreciate that they must all be at the correct stage at precisely the right time, I can forgive my plants the occasional miss.

Len Lawler
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The Royal Horticultural Society Orchid Registration Advisory Committee

Newsletter No. 14

1. Notices to Registrants

a. The International Registration Authority apologises for the continuing delay in processing applications received during May and June.

The existing computer system was originally developed during the 1980s and is being replaced by a PC using FoxPro software. This new system is being extensively tested before use. When fully operational it should not only accelerate routine processing but also facilitate a range of other services. Further details of these will be published when available.

b. It is understood that some applicants have experienced difficulties in remitting monies for application fees to the UK. If any person is affected would they write to the Registrar so that alternative arrangements may be discussed.

2. Trademarks: a Warning!

Registrants should be aware that in some countries it is increasingly the practice to use trademarks as part of the marketing strategy for new plants. Such trademarks may not be used as the grex name for the plants concerned, nor may they form any part of such a name. Furthermore when a word has been trademarked it is not then permissible for anyone else to use this word as, or as part of, a grex or cultivar name for any other plant. Only the trademark holder may use the mark in selling their plants.

Such restrictions may be retroactive and may be enforceable outside the country of origin.

Responsibility for checking that a new grex or cultivar epithet does not include a registered trademark rests with the author of the name not the registration authority. The practice has obvious destabilising potential for plant nomenclature and should be discouraged.

3. 1991-1995 Addendum to Sander's List of Orchid Hybrids

The latest volume, covering registrations from 1 January 1991 to 31 December 1995 and extending to 1170 pages, will be published shortly. The UK price is #45.00 and it will be available from RHS Enterprises Ltd, The Royal Horticultural Society Garden, Wisley, Woking, Surrey, GU23 6QB, England. North American customers should obtain their copies from The American Orchid Society, 6000 South Olive Avenue, West Palm Beach, Florida 33405, USA.

Because of their projected size it is proposed that future Addenda will be published every three years rather than at the present five-yearly intervals.

4. Publication of Corrections and Amendments to SLOH

Corrections and amendments to the 1991-1995 Addendum will be published in the New Orchid Hybrids list in the Orchid Review and journals reprinting this list. All corrections, amendments and additions to the International Orchid Register are entered in the computer database and are then used for the production of both the CD-ROMs and traditionally printed compilations.

5. Handbook on Orchid Nomenclature and Registration

A new (5th) edition of the "Handbook" is scheduled for publication in 1999. There are substantial implications for orchid hybrid nomenclature and registration following the publication of new editions of the International Code of Botanical Nomenclature and the International Code of Nomenclature for Cultivated Plants. These matters will be discussed by the International Orchid Commission at its meeting at 15WOC in Brazil in September.

6. The Orchid Database Company Pte Ltd

The Final Beta edition of Part II of Version 3 (ie WindowsTM based) of The RHS Orchid Information System CD-ROM has now been critically evaluated and is due for publication in July 1996. In addition to several reference and historic texts it contains over five-thousand illustrations taken from colour photographs of awarded plants of the American Orchid Society and the All Japan Orchid Society and the watercolours of Royal Horticultural Society awarded *Doritaenopsis* and *Phalaenopsis*.

A revised and up-dated edition of Part 1 of Version 3 is scheduled for September this year.

7. Secretary of the Orchid Registration Advisory Committee

The Orchid Registrar (Peter F Hunt) has now replaced the Senior Registrar (Alan C Leslie) as Secretary. All correspondence should be addressed to him at PO Box 1072, Frome, Somerset, BA11 5NY, England (fax +44 (0) 1373 465746).

New Orchid Hybrids

JANUARY/FEBRUARY/MARCH 1996 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
ALEXANDERARA		
Golden Choristers	*Mclna.* Pagan Lovesong × *Oda.* Goltrix	George Black
ALICEARA		
Josef Roth	*Mtssa.* Amazon × *Onc.* Henry Kristiansen	A. Schilliger
ANGULOCASTE		
Andy's Gift	*Angcst.* Olympus × *Lyc.* Balliae	W. & M. Lomas (O/U)
Dennis Kleinbach	*Lyc.* Frank Hoyt × *Angcst.* Georgius Rex	Baker & Chantry
ASCOCENDA		
Carolina Skies	*Ascda.* Queen Florist × *V. coerulea*	Breckinridge
Fuchs Amber Blaze	*Ascda.* David Foster × *V.* Fuchs Horizon	R. F. Orchids
Memoria Gabriel Piedrahita	*Ascda.* Fuchs Glow × *V.* Mae Sai	R. F. Orchids
Petit Orange	*Ascda.* Wanpen × *Asctm. curvifolium*	K. Karasawa
Teh Su Kuan	*V.* Thanantess × *Ascda.* Thananbarg	Lim Ee Lim
Wise's Princess Irina	*V.* Suwapee × *Ascda.* Boonchoo Bonanza	Mrs I. Wise
Wiso Pascuale	*V.* Southeast Beauty × *Ascda.* Flambeau	Coqui
BARBOSAARA		
Walter Tresch	*Wils.* Intermezzo × *Gom. crispa*	A. Schilliger
BARKERIA		
Sarina	*skinneri* × *melanocaulon*	R. Schafflützel
Sparkle Doll	Dollnery × *skinneri*	K. Arai
BEALLARA		
Cedric Maunder	*Bllra.* Devon Monarch × *Oda.* Robert Dugger	George Black
Devon Monarch	*Bllra.* George Smith × *Odm.* Perolia	George Black
Inigo Gallo	*Bllra.* Tahoma Glacier × *Milt.* May Moir	A. Schilliger
BRASSIDIUM		
Cosmo-Brachy	*Brs. caudata* × *Onc. brachyandrum*	Kokusai
BRASSOCATTLEYA		
Candy Anderson	*C.* Candy Tuft × *Bc.* Mount Anderson	Tsutomu Kato
Memoria Anna Plosky	*C.* Easter Treasure × *B. digbyana*	A. Borello
Paulicia Gurfinkel	*C. intermedia* × *B. glauca*	S. Gurfinkel
Provence Spirit	*Bc.* Languedoc × *Bc.* Pure Spirit	Minoru Ind. (Y. Ikumoto)
Star of Atsumi	*Bc.* Binosa × *B.* Jimminey Cricket	Masayuki Suzuki
BRASSOEPILAELIA		
Golden Spice	*Bl.* Richard Mueller × *Epi. stamfordianum*	Carmela
BRASSOLAELIOCATTLEYA		
Autumn Mist	*C.* Roman Silver × *Blc.* Malworth	Sea God Nurs.
Buckaroo	*Lc.* Spring Imp × *Blc.* Saint Helena Sound	K. Zytaruk (Carter & Holmes)
Burdekin Sunset	*Blc.* Oconee × *Blc.* Waikiki Sunset	S. Scalia
Citrous Magic	*Bc.* Pastoral × *Blc.* Memoria Helen Brown	Dogashima
Doña Lillian	*Lc.* Roy Finley × *B. nodosa*	Coqui
Doña Yiyín	*Blc.* San Diego Sunset × *Lc.* Trick or Treat	Coqui
Ginger Cream	*Lc.* Stephen Oliver Fouraker × *Blc.* Memoria Helen Brown	Dogashima
Golden Choice	*Lc.* Tropical Sunset × *Blc.* Vicky Gold	Suwada Orch.
Golden Grange	*L. tenebrosa* × *Blc.* Gift	K. Arai
Grand Gift	*L. grandis* × *Blc.* Gift	K. Arai
Harry Rickman	*C.* Flossie Bow × *Blc.* Waikiki Gold	R. Gillespie (E. Rickman)
Husky Boy	*Blc.* Evergreen × *Lc.* Orglade's Glow	Dogashima
Joy of Paula	*Blc.* Malvern × *B. digbyana*	J. Grezaffi
Lady's Favorite	*Blc.* Vicky Gold × *Lc.* Little Oliver	Suwada Orch.
Larry's Gem	*Blc.* Ports of Paradise × *C.* Bob Betts	D. Deardorff
Little Baby Face	*Blc.* Sunset Bay × *Lc.* Peggy Huffman	Y. Tokumoto
Love Cup	*Blc.* Love Sound × *Blc.* Buttercup	Haruo Sato (Dogashima)
Lovely Mitsuko	*Blc.* Don De Michaels × *Lc.* Drumbeat	T. Takeda
Love Romance	*Blc.* Memoria Helen Brown × *Blc.* Love Sound	Dogashima
Lucky Lavender	*Blc.* Lucky Strike × *L. pumila*	K. Arai

NAME	PARENTAGE	REGISTERED BY
BRASSOLAELIOCATTLEYA continued		
Lumigold	*Lc.* Luminosa × *Blc.* Waikiki Gold	K. Arai
Memoria Minerva Burr	*Blc.* Pierrot × *Lc.* Laura Thayer	Sea God Nurs.
Mercedes Lopez	*Bl.* Richard Mueller × *C.* Chloe	Coqui
Pamela Finney	*Lc.* Irene Finney × *Blc.* Pamela Hetherington	Fuji Nurs.
Pastoral Sound	*Blc.* Love Sound × *Bc.* Pastoral	Suwada Orch.
Perky Nymph	*Blc.* Dazzler × *C. luteola*	H. Wallbrunn
Pisgah Sunglow	*Lc.* Royal Emperor × *Blc.* Apricot Flare	Owens Orchids
Prince Abi	*C. loddigesii* × *Blc.* Feeling Love	K. Taguchi
Princess Kumiko	*Lc.* Red Empress × *Blc.* Don De Michaels	K. Miyoshi (Fuji Nurs.)
Renata Maluf	*B. perrinii* × *Lc.* Lourdes Verboonen	J. Maluf
San Yeh Stripes	*C.* Sedlescombe × *Blc.* George Angus	Sogo
Sierra Belle	*Blc.* Sierra Gold × *Lc.* Edgard Van Belle	Sea God Nurs.
Smart Lady	*Blc.* Love Sound × *L. anceps*	Suwada Orch.
Sybil Farwell	*Blc.* Fred Stewart × *C.* Horace	R. Farwell (Carmela)
Taira-Machi Glory	*Lc.* Manila × *Blc.* South Ghyll	T. Komiyama (O/U)
Walden's Glen	*C. bicolor* × *Blc.* Oconee	Lines
Walden's Sunset	*C. bicolor* × *Blc.* Memoria Roselyn Reisman	Lines
CALANTHE		
Awa	Ishizuchi × *sieboldii*	K. Mizukuchi
Azuchi	Kokubu × Kozu	Chiseki Takeda
Bungo	Hizen × *tricarinata*	E. Murakami
Chikugo	Kisyozyo × *aristulifera*	Y. Murakami
Chiseki	Bicolor × Kozu	Chiseki Takeda
Dogo	*discolor* × Hizen	Y. Sawai
Edo	Tosa × *discolor*	K. Mizukuchi
Fuji	Satsuma × Kozu	Yoshiaki Murakami
Hachijyo	Suisyo × *discolor*	Y. Murakami
Hakutsuru	*triplicata* × *alpina* †	I. Ito
Hayama	Higo × Hizen	Yukio Takahashi
Hayato	Hizen × Satsuma	Y. Murakami
Heian	Osumi × *izu-insularis*	Chiseki Takeda
Higo	*aristulifera* † × *sieboldii* †	I. Ito
Hizen	*discolor* † × *aristulifera*	I. Ito
Hyuga	Kisyozyo × *discolor*	Yoshiaki Murakami
Ise	Tosa × *sieboldii*	K. Mizukuchi
Ishizuchi	*discolor* × *tricarinata*	I. Ito
Izu	Nioichirimen × *discolor*	Chiseki Takeda
Kamakura	Kokubu × *izu-insularis*	Chiseki Takeda
Kamigamo	*reflexa* × *triplicata*	I. Ito
Kamome	§ Bicolor × *triplicata*	I. Ito
Kannan	Kozu × Ishizuchi	Chiseki Takeda
Kasuga	Bicolor × *izu-insularis*	I. Ito
Kibananioi	*sieboldii* × *izu-insularis* †	I. Ito
Kinkaku	*sieboldii* × *nipponica* †	Hanako Ito
Kisyozyo	*sieboldii* × *tricarinata*	M. Tahara
Kita	Satsuma × *tricarinata*	K. Mizukuchi
Kogane	*sieboldii* × *alpina*	I. Ito
Kokubu	Higo × *discolor*	K. Karasawa
Kozu	*discolor* × *izu-insularis*	K. Karasawa
Kuroshima	*masuca* × *alismaefolia* †	I. Ito
Michinoku	Kozu × *tricarinata*	H. Murakami
Mikura	Hizen × *izu-insularis*	K. Mizukuchi
Misyo	Higo × *tricarinata*	I. Nakao
Miyuki	Higo × Kozu	A. Kaneko
Muromachi	Osumi × Kozu	Chiseki Takeda
Nioichirimen	*izu-insularis* × *tricarinata*	I. Ito
Osumi	Hizen × *sieboldii*	K. Karasawa
Ozu	Bicolor × Hizen	Chiseki Takeda
Rie	Bryan × Kurama	K. Karasawa
Satomi	*vestita* × Kyoto	K. Karasawa
Satsuma	Bicolor × *aristulifera*	K. Karasawa
Shikoku	Kozu × *aristulifera*	Y. Sawai
Suisyo	*aristulifera* × *izu-insularis*	K. Karasawa
Suruga	Higo × *izu-insularis*	K. Mizukuchi
Takanabe	Ishizuchi × *izu-insularis*	Y. Murakami
Takasarumen	Bicolor × *tricarinata*	I. Ito
Tomisu	Hizen × Kozu	Chiseki Takeda
Tosa	*aristulifera* × *tricarinata*	Y. Murakami
Tsukushi	Ishizuchi × *aristulifera*	Y. Murakami
Usubenizuru	*izu-insularis* × *triplicata*	I. Ito
Uwa	Higo × Bicolor	I. Nakao
Yamato	Satsuma × *izu-insularis*	K. Mizukuchi

NAME	PARENTAGE	REGISTERED BY
CALOPOGON		
Queenie	*tuberosus* × Adventure	C. Whitlow
CATTLEYA		
Bookie's Max	Louise Georgianna × *maxima*	H. Book
Bowpurple	*bowringiana* × Fascelis	K. Arai
El Dorado Splash	Little Dipper × Angelwalker	Gold Country
Fernanda Maluf	Penny Kuroda × *gaskelliana*	J. Maluf
Louise Shealy	Valentine × *percivaliana*	B. Thomas (C. Whitlow)
Port Borinquen	Port Wine × Fascelis	Coqui (O/U)
Tessloo	*amethystoglossa* × *forbesii*	R. Van Roy
CATTLEYTONIA		
Starrlyn	*Ctna.* Capri × *Ctna.* Why Not	R. Farwell
CIRRHOPETALUM		
Thouputi	*putidum* × *umbellatum*	M. Uchida
CIRRHOPHYLLUM		
Crab Claw	*Cirr. rothschildianum* × *Bulb. dayanum*	Mrs R. Levy
COCHLENIA		
Risaralda	*Stenia pallida* × *Cnths. amazonica*	Orq. Sua mena
COELOGYNE		
Andreé Millar	*beccarii* † × *speciosa*	P. Spence
CYMBIDIUM		
Alder Peak	Sorrento Sunshine × Via Rincon-Vista	Orchid Zone (M. Pendleton)
Ambar Tranquila	Via Mar Tranquila × Via Ambarino	E. Caughlan
Aristocratic	Beaconfire × Kurun	N. Lenkic (O/U)
Asilomar	Gilgamesh × Spartan Queen	Orchid Zone (M. Pendleton)
Beautiful Janet	Elite Beauty × Janet Holland	Orchid Park (Geyserland)
Best Pal	Alison Shaw × Doctor Baker	Cal-Orchid (Geyserland)
Clarity	Winter Wonder × Mary Ann	N. Lenkic (S. Lenkic)
Daily Planet	Solana Beach × Peter Pan	Rowe (H. Sakell)
Danceland	Cariga × Evening Star	N. Lenkic (O/U)
Dean Roesler	Brown Eyes × *suave*	M. Seton
Dramatize	Kurun × Yowie Flame	N. Lenkic (S. Lenkic)
Electric Show	Kurun × Arafair	N. Lenkic (S. Lenkic)
Florafest's Black Magic	Australian Midnight × Rio Rita	Florafest (C. Wuth)
Fresh Touch	Amesbury × Fresh Air	N. Lenkic (S. Lenkic)
Gentle Touch	Amesbury × Borough Green	N. Lenkic (S. Lenkic)
Gripper	High Sierra × Dag	Orchid Park (Geyserland)
Hot Night	Brunette × Sensation	N. Lenkic (S. Lenkic)
Jacks Peak	Mimi × Jolity	Orchid Zone (M. Pendleton)
Joshua James	South Coast × Nicki Connal	M. Seton
Kiwi Rose	Western Rose × Ivy Fung	R. Tucker
Lady Annette	Alegria × Claude Pepper	R. Tucker
Lady Ruby	Rincon Lady × Baltic Cove	J. Walters
Lady Susan	Alegria × Yowie Flame	R. Tucker
Las Gazas Creek	Rincon × Robin Redbreast	Orchid Zone (M. Pendleton)
Lyndon-Sue	Araluen × Perfect Match	M. Seton
Nicki Connal	Balkis × Los Angeles	M. Seton (O/U)
Palo Corona	Jolity × Solana Beach	Orchid Zone (M. Pendleton)
Panache Pacifica	Pendragon × Rincon	J. Walters
Pfeiffer Point	Sea Witch × Voodoo	Orchid Zone (M. Pendleton)
Piedras Blancas	Wyanga × Olymilum	Orchid Zone (M. Pendleton)
Pinnacle Cone	Mimi × Ruby Magic	Orchid Zone (M. Pendleton)
Precious Pearl	Pendragon × Mary Ann	N. Lenkic (S. Lenkic)
Prince	Panama Red × Bexley Radiance	N. Lenkic (O/U)
Pywacket	Tethys × *tracyanum*	E. Caughlan (Geyserland)
Redletter	Wallacia × Ruby Eyes	N. Lenkic (Schaefers)
Seneca Creek	Hamsey × Solana Beach	Orchid Zone (M. Pendleton)
Shirley Egleton	Mad Magic × *lowianum*	M. Seton
Showstopper	Winter Wonder × Rincon Royale	N. Lenkic (S. Lenkic)
Southdown	Dag × Cloversheen	Orchid Park (Geyserland)
Spilled Wine	Splatters × Sensational Vintage	E. Caughlan (Geyserland)
Sweet	Pendragon × Rio Rita	N. Lenkic (Chiles Orch.)
Vicente Creek	Waltz × Jolity	Orchid Zone (M. Pendleton)
Wendy Wills	Peter Piper × Sensation	M. Seton
White Creek	Rincon × Olymilum	Orchid Zone (M. Pendleton)
Zigzag Creek	Mimi × Robin Redbreast	Orchid Zone (M. Pendleton)
Zymotic	Last Chance × Trigo Royale	R. Tucker

NAME	PARENTAGE	REGISTERED BY
DEGARMOARA		
Libelle	*Mtssa.* Penny Micklow × *Odtna.* Tänzerin	A. Schilliger
DENDROBIUM		
Agena Harmony	Ekapol × Petticoat	K. Karasawa
Agena Jewel	Petit Cake × Madame Thong-In	K. Karasawa
Aloha Touch	Classic Gem × Carol Kamemoto	Aloha Orchids
Amun-Re	*terrestre* × *convolutum*	R. Angus (P. Spence)
Ante Giant	Hawaiian Gem × *stratiotes*	K. Karasawa
Bellinger River	Hilda Poxon × Aussie Victory	N. Mitchell
Canali Gold	New Horizon × Livingstone	K. Karasawa
Charisse	Wong Bee Yeok × Singapore White	Puentespina Orch.
Chutima	Jaq-Hawaii × *draconis*	K. Thammasiri
Constance deBruyne	*nindii* × *gouldii*	de Bruyne (Ong Boon Thuan)
Cosmo-Smile	*mohlianum* × *smilliae* †	Kokusai
Doctor Jamilah Ariffin	Ng Eng Cheow × Yong Kok Wah	Ong Siew Buay (Ng Boon Chiew)
Enobi Candy	Enobi Tips × Hawaiian Ministripe	K. Karasawa
Enobi Mermaid	Enobi Tips × *phalaenopsis*	K. Karasawa
Enobi Parade	Enobi Komachi × Petticoat	K. Karasawa
Enobi Princess	Enobi Tips ×Laguna Princess	K. Karasawa
Enobi Purple	Enobi Komachi × Laguna Princess	K. Karasawa
Enobi Star	Galaxy Stripe × Enobi Komachi	K. Karasawa
Gillieston's Pepper Pot	Limestone × *teretifolium*	Florafest (W. Skillicorn)
Gordon Young	Margaret Paxton × *speciosum*	H. G. Young
Hamana Fancy	Hohoemi × Specio-kingianum	Saeki Nurs.
Hamana Smile	Hohoemi × *speciosum*	Saeki Nurs.
Little Delight	Yellow Chinsai × *moniliforme*	K. Arai
Lovely Nature	Lowana Nioka × *antennatum*	Michel Vacherot
Manoa Beauty	Kaimuki Beauty ×Sandy Kunimoto	Univ. of Hawaii
Miyoko Azuma	Jaquelyn Thomas × Manoa Beauty	Univ. of Hawaii
Mountain Magic	*pseudoglomeratum* × *cuthbertsonii*	Mountain
Penang Little Spider	Black Spider × *canaliculatum*	Ooi Leng Sun
Penang Sugar	Penang Jewel × Classic Gem	Ooi Leng Sun
Rio's Candy	Le-Lo-Lai × Autumn Stripes	J. Rios (O/U)
Robert Fujitake	Burmese Ruby × *lasianthera*	Hawaiian Paradise (K. Kamiya)
Ruo Qi	White Fairy × Nanen Beauty	How Yee Peng
Sabine	Keiki Belle × *canaliculatum*	Wong Siew Hong (O/U)
Sakura Lady	Super Lady × Yayoi	M. Inamine
Sapphire King	Tokiwa Shimonishi × Memoria Ellison Onizuka	K. Karasawa
Sharon Sewake	Mini Gem × Manoa Beauty	Univ. of Hawaii
Snow Child	Hakucho × Kamakura	M. Inamine
Star Egg	Sweet Lemon × Hatsuyume	M. Inamine
Summer Queen	Tomoflake × Red Princess	M. Inamine
Sunlands Paydirt	Norman × Queensland Gold	S. Heyden
Sunlands Shedevil	Sunlands Devil × Dark Dame	S. Heyden
Sunlands Twister	Sunlands Devil × *lasianthera*	S. Heyden
Tamaraw	*bicaudatum* † × *taurinum*	C. Zapata
Tom de Bruyne	Sunny Phua × *nindii*	de Bruyne (Ong Boon Thuan)
Vic's Gold	*gouldii* × *bicaudatum*	C. Zapata
Winnie Quek	Sabine × *bigibbum*	Wong Siew Hong (Y. Alsagoff)
**DEROSAARA (Droa.)*		
Divine	*Brap.* Serene × *Odtna.* Lake Harbor	P. Cataldo
DIACATTLEYA		
Chantilly Lace	*C.* El Dorado Splash × *Diacm. bicornutum*	Orchid Zone (M. Pendleton)
DISA		
Christa Badenhorst	Unikewbett × Sunset	S. & M. Cywes
Christina Pienaar	Kristo Pienaar × Riëtte	S. & M. Cywes
Gaynor Rupert	Foam × Kewdior	S. & M. Cywes
Rosemarie Boetteher	Marlene Cywes × Unifoam	S. & M. Cywes
DIURIS		
Mule	*drummondii* × *sulphurea* †	Nesbitts
DORITAENOPSIS		
All American Beauty	*Phal.* All American × *Dtps.* Mount Beauty	Hausermann
Brecko Beinosa	*Phal. venosa* × *Dtps.* Ta Bei Chou	Breckinridge
Brecko Coralzan	*Dtps.* Coral Gleam × *Phal.* Tungku Afzan	Breckinridge
Brecko Florpuff	*Phal.* Florida Snow × *Dtps.* Hampshire Puff	Breckinridge
Brecko Idagleam	*Dtps.* Coral Gleam ×*Phal.* Ida Fukumura	Breckinridge
Brecko Pearlpuff	*Dtps.* Orglade's Puff × *Phal.* Dorothy's Pearls	Breckinridge

NAME	PARENTAGE	REGISTERED BY
DORITAENOPSIS continued		
Brecko Stumist	*Dtps.* Canyon Mist × *Phal. stuartiana*	Breckinridge
Brecko Wine	*Dtps.* Jim × *Phal.* Ida Fukumura	Breckinridge
Classic Dream	*Dtps.* Hausermann's Classic × *Phal.* Georgia Philippe	Hausermann
Classic Lace	*Phal.* Candy Lace × *Dtps.* Hausermann's Classic	Hausermann
Devonshire Earth	*Dtps.* Earth Ames × *Phal.* Devon Michele	J. Stubbings (Carmela)
Formosa Rose	*Dtps.* Taisuco Kinlentine × *Dtps.* Hsinying's Coral	Sogo
Isolte	*Dtps.* Lippe-Alta × *Phal.* Lesa's Fujio	S. Ludlum (O/U)
Kelsie Takasaki	*Dtps.* Autumn Leaves × *Phal.* Bonnie Vasquez	Carmela
Lippe-Alta	*Dtps.* Via Alta × *Phal.* Lippepracht	S. Ludlum (O/U)
Malibu Affection	*Phal.* Be Tris × *Dtps.* Acapulco	Zuma Canyon
Malibu Blossoms	*Dtps.* La Salle × *Phal.* Be Glad	Zuma Canyon
Malibu Castle	*Dtps.* White Castle × *Dtps.* Zuma White Puff	Zuma Canyon
Malibu Emotion	*Dtps.* Andrew × *Dtps.* Alice Loeb	Zuma Canyon
Malibu Icon	*Dtps.* Yalta × *Phal.* Rousserole	Zuma Canyon
Malibu Leopard	*Dtps.* Duki × *Phal.* Ho's Fancy Leopard	Zuma Canyon
Malibu Miss	*Dtps.* Duki × *Phal.* Zuma Red Eye	Zuma Canyon
Malibu Model	*Phal.* Brazilian Legend × *Dtps.* Coral Harbor	Zuma Canyon
Malibu Music	*Phal.* Neon Stripes × *Dtps.* Karta	Zuma Canyon
Malibu Target	*Phal.* Yukimai's Heartbeat × *Dtps.* Duki	Zuma Canyon
Malibu Tartan	*Dtps.* Veracruz × *Phal.* Massachusetts Stripe	Zuma Canyon
Mei Dar Beauty	*Dtps.* Red Eagle × *Phal.* Frisson	Sogo
Memoria Gerald Berenberg	*Phal.* Barbara Moler × *Dtps.* Ton Jy Pecan	Gemstone
Minho Princess	*Dtps.* Sun Prince × *Phal.* Ta Lin Freeds	Sogo
Minho Stripes	*Phal.* Taisuco Minho × *Dtps.* Sun Prince	Sogo
Miva Intermezzo	*Dtps.* Marta De Rivilla × *Dtps.* Orglade's Tartan	Michel Vacherot
Miyarabi Pearl	*Dtps.* Casablanca Joy × *Phal. amabilis*	K. Karasawa
Miyarabi Swan	*Dtps.* Casablanca Joy × *Phal.* Bonbori	K. Karasawa
Morning Snow	*Dtps.* Morning Fog × *Dtps.* Signal's Snow	Lines
Pisgah Affair	*Dtps.* Hey Lady × *Phal.* Red Lip	Owens Orchids
Pisgah Pleasure	*Dtps.* Margery Adams × *Phal.* Hausermann's Goldcup	Owens Orchids
Pisgah Superb	*Dtps.* Pisgah Sands × *Phal.* Ida's Medallion	Owens Orchids
Red Eagle	*Dtps.* Ta Bei Chou × *Phal.* Vicki Sue Lockhart	Sogo
Sadie	*Dtps.* No Complaints × *Phal.* Memoria Thekla Johnson	Colourfull Nurs.
Saigon Tet Festival	*Phal.* Pink Festival × *Dtps.* Memoria Patrick Meistrell	L. Ngo
Signal Point	*Dtps.* Morning Fog × *Phal.* Illini Star	Lines
Sohma Purple	*Dor. pulcherrima* × *Phal.* Manipalo	Kokusai (M. Soma)
Sunlands Pinto	*Dtps.* Warana × *Phal.* Leucadia Dazzle	S. Heyden
Sunlands Pipedream	*Dtps.* Orglade's Puff × *Phal.* Queenslander Queen	S. Heyden
EPIDENDRUM		
Eagle Valley	King Valley × Sun Valley	M. Inamine
Magic Valley	Star Valley × King Valley	M. Inamine
Petit Doll	*criniferum* † × Plastic Doll	K. Arai
Yellow Capri	*pseudepidendrum* × *capricornu* †	K. Arai
EPILAELIOCATTLEYA		
Don Herman	*Lc.* Gold Digger × *Epi. stamfordianum*	Carmela
**ESTELARA (Esta.)*		
Friedel Eigen	*Vnra.* Sonia × *Ttma. canaliculata*	Dr L. Schott
GALEANDRA		
Mike Moses	Sandy Stubbings × *batemanii*	J. Stubbings
KEFERANTHES		
Sua Mena	*Cnths. amazonica* × *Kefst. tolimensis*	Orq. Sua mena
KIRCHARA		
Memoria Gladys Allison	*Epi. diurnum* × *Slc.* Swizzle	Allison
LAELIOCATONIA		
El Dorado	*Lc.* Trick or Treat × *Bro. sanguinea*	D. Deardorff
Red Roth	*Ctna.* Keith Roth × *L. tenebrosa*	K. Arai
LAELIOCATTLEYA		
Antonetta Esk	*Lc.* South Esk × *Lc.* Antonetta Mahan	Fuji Nurs.
Asahi River	*Lc.* Stephen Oliver Fouraker × *Lc.* Kitashirakawa	Fuji Nurs.
Bear Creek	*Lc.* Scarlet Imp × *Lc.* Adelaide Waltman	Baker & Chantry
Becky Brasseur	*Lc.* Excellency × *C.* Queen Sirikhit	J. Grezaffi
Bizen Fouraker	*Lc.* Stephen Oliver Fouraker × *C.* Old Whitey	Fuji Nurs.
Claudia Maluf	*L. crispata* × *Lc.* Culminant	J. Maluf
Clear Butterfly	*L.* Pastoral Symphony × *C. walkeriana*	Suwada Orch.
Cosmo-Color	*Lc.* Bonanza Queen × *Lc.* Colorama	Kokusai
Evaldo Wenzel	*Lc.* José Dias Castro × *Lc.* Léviathan	S. Barani (E. Wenzel)

NAME	PARENTAGE	REGISTERED BY
LAELIOCATTLEYA continued		
Gordon Duane Schaber	*Lc.* Pirate King × *Lc.* Pandora Bracey	Sea God Nurs.
Limbo Dancer	*C.* Port Borinquen × *Lc.* Trick or Treat	Coqui
Memoria Hans Nyffeler	*Lc.* Max und Moritz × *C. bicolor*	A. Schilliger
Mishima Beauty	*L. anceps* × *C.* Interglossa	Cal-Orchid (Hanajima's)
Natalie Clark	*L. briegeri* × *C.* Penny Kuroda	J. Maluf
New Beginnings	*Lc.* Mary Elizabeth Bohn × *Lc.* Amethystella	J. Jory
Oaklynn	*Lc.* Laurie Lynn × *Lc.* Oakland	Daniger
Princess Mii	*L.* Starry Sky × *Lc.* Mini Purple	K. Taguchi
Puppy Candy	*Lc.* Puppy Love × *C.* Candy Tuft	Fuji Nurs.
Sanyo Delight	*L. pumila* × *C.* Tiffin Bells	Fuji Nurs.
Shauna Gialluisi	*Lc.* Acker's Madison × *Lc.* Mini Purple	Hausermann
Southern Squall	*Lc.* Mildred Rives × *Lc.* Stephen Oliver Fouraker	Dogashima
Special Lady	*Lc.* Pri Pri × *C. walkeriana*	Masayuki Suzuki (Nozawa Orch.)
Spring Candy	*C.* Candy Tuft × *L. jongheana*	Fuji Nurs.
Taira-Machi Prism	*Lc.* Amber Glow × *Lc.* Prism Palette	F. Komiyama (O/U)
Tydeainter	*Lc.* Tydea × *C. intermedia*	Fuji Nurs.
Wedding March	*C.* Horace × *Lc.* Elizabeth Off	F. Komiyama (O/U)
LYCASTE		
Foret D'Argonne	*leucantha* × *cochleata*	P. Bertaux
Kageyuki Delight	Wyld Court × Macama	K. Mito
Memoria Kageyuki Mito	Shoalhaven × Memoria Bill Congleton	K. Mito
MASDEVALLIA		
Goldfinch	*constricta* × *triangularis*	Hoosier
Ibáñez-Behar	Falcata × *floribunda*	H. Ibáñez
Janice Hanson	Angel Frost × *caudata*	Baker & Chantry
Pixie Toy	Maryann ×Copper Angel	Orchid Zone (M. Pendleton)
MILPASIA		
Hans Blättler	*Mpsa.* Leopard × *Milt.* Memoria Gilbert Perroud	A. Schilliger
MILTASSIA		
Abendstern	*Mtssa.* Penny Micklow × *Milt. clowesii*	A. Schilliger
Martina Peter	*Brs.* Rex × *Milt.* Anne Warne	A. Schilliger
Memoria Alois Köhle	*Mtssa.* Charles M. Fitch × *Milt. clowesii*	A. Schilliger
Memoria Walter Eigel	*Brs.* Rex × *Milt.* Angela Barker	A. Schilliger
Radermaker	*Mtssa.* Aztec × *Milt.* Earl Dunn	M. Radermaker (O/U)
Sonnegg	*Mtssa.* Cairns × *Milt.* Friedheim	A. Schilliger
Suzanne Anderhub	*Mtssa.* Robert Anderhub × *Milt.* Goodale Moir	A. Schilliger
MILTONIA		
Bastian Widmer	Goodale Moir × *candida*	A. Schilliger
Blackberry Meadow	Blackberry Cream × Meadowdale	Beall
Doug DuVall	Meadowdale × Nancy Binks	Beall
Eunice Frank	Patricia Baker × Tom Lyczko	Baker & Chantry
Ligia Posada	Seattle × Gary Baker	Baker & Chantry
Mäni Weber	Brutips × *roezlii*	A. Schilliger
Strawberry Falls	James Iver Mattson × Cambrian Park	E. Carlson
NAKAMOTOARA		
Thai Surprise	*Ascda.* Peggy Foo × *Neof. falcata*	R. Griesbach (Bangkok Fl. Centre)
ODONTIODA		
Almaviva	*Oda.* Margarete Holm × *Odm.* Pumistor	Charlesworth Div. McBean's
Baldstone	*Oda.* Harry Baldwin × *Oda.* Flintstone	Glen. O. Acres (Keith Andrew)
Double Harry	*Odm.* Yellow Harry × *Oda.* Harry Baldwin	Glen. O. Acres (Keith Andrew)
Hyramar	*Odm.* Hyrastro × *Oda.* Flomar	H. Rohrl
Konstanze	*Odm.* Phioman × *Oda.* Durham Lace	Charlesworth Div. McBean's
La Traviata	*Oda.* Heatonensis × *Oda.* Ingmar	Charlesworth Div. McBean's
Pedrillo	*Oda.* Margarete Holm × *Oda.* Ingmar	Charlesworth Div. McBean's
Rigoletto	*Oda.* Margarete Holm × *Oda.* Harrods Forever	Charlesworth Div. McBean's
Shirley Maclaine	*Oda.* Stromar × *Oda.* Saint Clement	J. L. Walker (O/U)
Vivaldi	*Oda.* Durham Supreme × *Odm. crispum*	Charlesworth Div. McBean's
ODONTOCIDIUM		
Anna Marie Schilliger	*Odm. bictoniense* × *Onc.* Henry Kristiansen	A. Schilliger
Costa Rican Snow	*Odcdm.* Costa Rica × *Odm.* First Snow	Beall
Golden Orb	*Odm.* Yukon Harbor × *Onc. blanchetii*	Beall
Tiger-Henry	*Odcdm.* Tiger Butter × *Onc.* Henry Kristiansen	A. Schilliger
ODONTOGLOSSUM		
Myra Cobbledick	Anne Gripp × Beaumont	Strawberry Creek (Unicorn)
Puccini	Wearside Prospect × Augres	Charlesworth Div. McBean's

NAME	PARENTAGE	REGISTERED BY
ODONTOGLOSSUM continued		
Sierra Stars	Stamfordiense × *rossii*	Paphanatics (Golden Gate)
Winter Dream	*bictoniense* × Dilperry	H. Rohrl
ONCIDIUM		
Angel Mist	Caledonia × Cotton Candy	Dr/Mrs K. Wilson
Brecko Pepicall	Memoria Pepita de Restrepo × *bicallosum*	Breckinridge
Gold Pixie	Milky Way × *longipes*	Minoru Ind. (H. Kondo)
Jamaican Blush	Cotton Candy × Jamaica	Dr/Mrs K. Wilson
Marilyn LeDoux	Golden Sunset × Memoria Alan Godlewski	L. Rogers (M. LeDoux)
Talley-Ho	Varimont × *forbesii*	Woodland
Valglen	J-Three × *marshallianum*	Dr/Mrs K. Wilson
Wavy Gravy	Enderanum × *gravesianum*	Rod McLellan Co.
OPSISANDA		
Cheetah	*V. tricolor* × *Vdps. gigantea*	H. Wallbrunn
Misty Morn	*Vdps. gigantea* × *V. teres*	H. Wallbrunn
OTAARA		
Robbin Crosby	*Ctna.* Our Dream × *Blc.* Orange Nuggett	Harry Crosby
PAPHIOPEDILUM		
Abracadabra	Magic Lantern × *bellatulum*	Orchid Zone (M. Pendleton)
Bandbox	British Concorde × Troyland	Ratcliffe
Blockbuster	New Edition × Eagle Lake	Orchid Zone (T. Root)
Brecko Nivera	New Era × *niveum*	Breckinridge
Brecko Sandeum	Sand Dollar × *niveum*	Breckinridge
Brecko Sukwiss	Wissinoming × *sukhakulii*	Breckinridge
Brecko Wishmist	Avalon Mist × Vista Wish	Breckinridge
Bronze Baroque	Baroque × Danaqueen	Ratcliffe
Campeche Warrior	Miyabi Kou × Alsan's Delight	A. Svoboda
Carolina Park	Hellas × McLaren Park	Breckinridge (Jemmco)
Carolyn Ethel	Tangold × Saint Ouens Bay	O. Viengkhou (Clark Day)
Catawissa	Glasnevin × Greenstede	W. W. Wilson
Chac Mool	Sunset Dune × Tommie Hanes	A. Svoboda
Chatspot	Personality × Jacandelo	Ratcliffe
Cherokee Mystic	Cherokee × Green Mystery	Paphanatics (Orchid Zone)
Chita Sweet	Robert Chrisman × Emerald Creek	T. Takimoto
Church Park	McLaren Park × Winston Churchill	Beckinridge (Jemmco)
Costano	Chippewa × Santee	W. W. Wilson
Cruiser	Uncle Jack × World Venture	Ratcliffe
Cusabo	Great Pacific × Via Cabazon	W. W. Wilson (O/U)
Cyberspace	Chili Colorado × Red Maude	Orchid Zone (M. Pendleton)
Deborah Norville	Lucille Mackey × Glorious Puddle	F. Booth
Drayton Plum	*purpuratum* × Dragon Ruby	Florafest
Dreaming Spires	Rosepoint × Shy Pastel	Ratcliffe
Eagle Heart	Eagle Lake × Queen of Hearts	Orchid Zone (T. Root)
Elaine Law	*niveum* × *tigrinum*	Maisie Orchids
Enterprise	Mildred Hunter × New World	Ratcliffe
Eunice Frank	Makuli × Joanne's Wine	Baker & Chantry
Fame and Fortune	British Bulldog × Miss World	Ratcliffe
Felton	Magic Mood × Hellas	Rod McLellan Co.
Free Radical	Miller's Daughter × Pink Sherbet	Ratcliffe
Free Tree	Freedom Hunter × Tree of Reminiscence	Breckinridge (Jemmco)
Fresh Heart	Lemon Hart × Jolly Green Gem	Suwada Orch.
Graceful Spot	Sharnden × Tenga	Suwada Orch.
Grand Slam	British Bulldog × Dazzler	Ratcliffe
Green Candy	Cadelyn × Jolly Green Gem	Suwada Orch.
Green Smoke	*malipoense* × Greyi	Orchid Zone (T. Root)
Green Window	Watercolor Artist × Jolly Green Gem	M. Tomisawa (Dogashima)
Halcyon Days	Shareba × Snowberry	Ratcliffe
Hamana Gold	*armeniacum* × Jolly Green Gem	Saeki Nurs.
Hamana Leopard	Santee × Hamana Mach	Saeki Nurs.
Hamana Rock	Hama Sholt × Hamana Mach	Saeki Nurs.
Happy Spot	Happy Tweed × Spotglen	Brackinridge (Jemmco)
Hill Spot	Happy Spot × Winston Churchill	Breckinridge (Jemmco)
Innagem	Innadale × Jolly Green Gem	Breckinridge (Jemmco)
Internet	Miss World × Winston Churchill	Ratcliffe
Island Mist	Greyi × Mystic Isle	Orchid Zone (T. Root)
Karok	King of Sweden × Greenstede	W. W. Wilson
Keewright	Cherokee × Ruth Wright	Breckinridge (Jemmco)
Keyba	Kay Rinaman × Sheba	Breckinridge (Jemmco)
Knight's Quest	Psyche × White Knight	Orchid Zone (T. Root)
Kukulcan	Pit River × Mine Own	A. Svoboda
Langley Eagle	Langley Pride × Eagle Lake	Orchid Zone (T. Root)

NAME	PARENTAGE	REGISTERED BY
PAPHIOPEDILUM continued		
Laren Lad	Ladero × McLaren Park	Breckinridge (Jemmco)
Leopard Tree	Flight Path × Spotter	O. Viengkhou (M. Kimura)
Lifeline	Amandahill × Lockinge	Ratcliffe
Lookalike	Dusty Belle × Olivia	Ratcliffe
Maltby	Fitchianum × *hennisianum*	Baker & Chantry
Mariah Carey	Eugenia Booth × Earl Booth	F. Booth
Meigetsu	Silvara × Yerba Buena	T. Takano
Memoria Billy Kramer	Cadence × Troyland	J. Kramer (Ratcliffe)
Mitsuyo Sakakibara	Betty Anderson × F. C. Puddle	N. Taki
Miyabi Kindachi	Miyabi Yuugiri × Personality	N. Izumi
Miyabi Utage	Valwin × Cutthroat Castle	N. Izumi (O/U)
Naomi's Long Shigi	Shigitatsusawa × Milmoore	N. Taki
Netcong	Monongahela × Burpham	W.W. Wilson
Olympic Leopard	Sea Leopard × Olympic Forest	O. Viengkhou (Capri Orchids)
Pacaba	Great Pacific × Sheba	Breckinridge (Jemmco)
Pale Charmer	Miller's Daughter × Sky Pastel	Ratcliffe
Palladium	Pamabella × Show Boat	Ratcliffe
Park Gem	Innagem × McLaren Park	Breckinridge (Jemmco)
Plum Treat	Robin I. Hall × Petronella	Ratcliffe
Podunk	Winston Churchill × Monongahela	W. W. Wilson
Porcelain Doll	Huddle × Gigi	Orchid Zone (T. Root)
Rancocas	William Wallach × Greenstede	W. W. Wilson
Raritan	Tacoma × Adwin	W. W. Wilson
Reputation	Uncas × British Bulldog	Ratcliffe
Ridgehill	Vasridge × Winston Churchill	Breckinridge (Jemmco)
Ruby Fire	Magic Flame × *fairrieanum*	Orchid Zone (M. Pendleton)
Ruby Line	Jewel Song × Winchilla	Ratcliffe
Sabatino	Muriel Constance × Greyi	N. Tannaci
Saien	Onyx × Goultenianum	T. Takano
Sakuragae	Queen Maud × F. C. Puddle	T. Takano
Sands of Time	Divisadero × Danella	Ratcliffe
Shirotae	Jocelyn × F. C. Puddle	T. Takano
Silver Knight	Tara Marie × White Knight	Paphanatics
Susanville	Peter Lassen × Shingletown	Rod McLellan Co.
Treevill Jaguar	Flight Path × Sparsholt	O. Viengkhou (M. Kimura)
Tucume	John Hanes × Great Pacific	A. Svoboda
Vasridge	Linda Vasquez × Eridge	Breckinridge (Jemmco)
Vista Wish	Wishkah River × Via Rio Vista	Breckinridge (Jemmco)
Voodoo Lounge	Docteur Knock × Dragon Wine	Cal-Orchid
Wessex Way	Aragon × Honey Plume	Ratcliffe
White Flash	Blanche Sawyer × Mooncrest	I. Muramatsu
Willow Crest	Valwin × Keyeshill	Y. Aoyagi
Winning Post	Amandahill × Conjola	Ratcliffe
Winter Sunset	Copperware × Snowberry	Ratcliffe
Wishing Well	Nassarah × Heather Bell	Ratcliffe
World Future	Gallant Future × Small World	Suwada Orch.
Yukiko Ishizaka	Narikatsu Ikeda × Milmoore	N. Taki
PHALAENOPSIS		
Aloha Blush	Maui Snowfall × Rich's Pride	Aloha Orchids
Alysha's Dots	Alysha's Rose × Brecko Pokonette	Carmela
Auckland Buddha	Paifang's Auckland × Fortune Buddha	Sogo
Barbara Jo Blackman	Hausermann's Goldcup × Breckinridge Snow	Breckinridge
Beautiful Morning	Double Delight × Bright Morning	Carmela
Bedford Betwixt	Pink Challenge × Carmela's Pixie	H. Ginsberg
Bedford Dopey	Terilyn Fujitake × *equestris*	H. Ginsberg
Blushing Moon	New Eagle × Abendrot	Gordon Heaps (O/U)
Bon Flame	Brother Gem × Charethy's Victory	Lehua (Blossoming O.N.)
Brecko Artris	*equestris* × Carolina White Art	Breckinridge
Brecko Berrosa	Berries 'n Cream × *venosa*	Breckinridge
Brecko Berrysweet	Berries 'n Cream × Sweet Memory	Breckinridge
Brecko Charcup	Hausermann's Goldcup × La Chartreuse	Breckinridge
Brecko Delzan	Zuma Aussie Delight × Tungku Afzan	Breckinridge
Brecko Desert-Shen	Liu Tuen-Shen × Margit Moses	Breckinridge
Brecko Devambo	Brecko Ambodoke × Deventeriana	Breckinridge
Brecko Devetune	Deventeriana × Wheel of Fortune	Breckinridge
Brecko Elfinfrost	Summit Frosty Jewel × Riverbend Elfin Frost	Breckinridge
Brecko Fairmark	Mark's Delight × Fairy Tales	Breckinridge
Brecko Fancilind	Ho's Fancy Leopard × *lindenii*	Breckinridge
Brecko Goldcas	Cassandra × Hausermann's Goldcup	Breckinridge
Brecko Goldsat	Brecko Satiness × Golden Buddha	Breckinridge
Brecko Grandgold	Hausermann's Goldcup × Blanca Grande	Breckinridge
Brecko Interfrost	Summit Frosty Jewel × Intermediana	Breckinridge
Brecko Jamcup	Hausermann's Goldcup × Jewell Jamison	Breckinridge

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Brecko Jewel Gem	Jewell Jamison × Carmela's Gem	Breckinridge
Brecko Lemonbell	Brecko Snowdome × Golden Bells	Breckinridge
Brecko Littleblush	Summit Blusher × Little Larry	Breckinridge
Brecko Littlefrost	Summit Frosty Jewel × Little Larry	Breckinridge
Brecko Little Gold	Little Pink Doris × Hausermann's Goldcup	Breckinridge
Brecko Little Kat	Little Netsuke × Kathleen Ai	Breckinridge
Brecko Littlemann	Hausermann's Goldcup × Little Larry	Breckinridge
Brecko Marberry	Berries 'n Cream × Margit Moses	Breckinridge
Brecko Marcup	Maraldee × Hausermann's Goldcup	Breckinridge
Brecko Marjewel	Margit Moses × Jewell Jamison	Breckinridge
Brecko Miniman	Mini Mark × *mannii*	Breckinridge
Brecko Monbell	Golden Bells × Claude Monet	Breckinridge
Brecko Monosa	*venosa* × Claude Monet	Breckinridge
Brecko Mooncup	Misty Moon × Hausermann's Goldcup	Breckinridge
Brecko Neon Candy	Neon Stripes × *venosa*	Breckinridge
Brecko Pearlems	Memoria Carl Klehm × Dorothy's Pearls	Breckinridge
Brecko Rosebell	Guilford Rose × Golden Bells	Breckinridge
Brecko Royalana	Royal Amboin × Deventeriana	Breckinridge
Brecko Royosa	Royal Amboin × *venosa*	Breckinridge
Brecko Saintimo	Saint George × Mivac Sweetissimo	Breckinridge
Brecko Sittris	*equestris* × Donna Sitton	Breckinridge
Brecko Snowcote	Pridgen's Greencote Ann × Florida Snow	Breckinridge
Brecko Snowpearls	Florida Snow × Dorothy's Pearls	Breckinridge
Brecko Snowspot	Petite Snow × Deventeriana	Breckinridge
Brecko Starcup	Hausermann's Goldcup × Poco's Starburst	Breckinridge
Brecko Sunglut	Covington Sunset × Lippeglut	Breckinridge
Brecko Toyson	Tinker Toy × Frisson	Breckinridge
Brecko Viewberg	Orchidview Gold × Spitzberg	Breckinridge
Brecko Viodoke	Okee Doke × *violacea*	Breckinridge
Canyon Gold	Memoria Regina Busse × Livingston's Dazzle	A. D. Stock
Carnival Dame	Carnival Queen × Dame de Coeur	Breckinridge
Cassandra Pixie	Cassandra × Carmela's Pixie	Nan Kung
Castrato	Welcome Home × Carnival Queen	Gemstone (Hausermann)
Chatterbox	First Impression × Rainbow Chip	Orchid Zone (H. Hager)
Cherished Smile	Prairie Du Chien × Smile Maker	Hausermann
Cherokee Gold	King's Ransom × Cherokee Snow	Breckinridge
Chita Pastel	Chita Pinky × Mishima Fall	T. Takimoto
Collin's Joy	Spanish Rose × Yasuji Takasaki	Carmela
Coqui's Carnival	Bamboo Baby × Carnival Queen	Coqui
Coqui's Spots	Summer Joy × French Delight	Coqui
Cream Cheese	Wild Honey × White Dream	S. Ogawa
Custom Made	Jamie Debs × Kenneth Rudolph	Hausermann
Donaldine Pringle	Liu Tuen-Shen × Carolina White Art	Breckinridge
Don Jose	Bola De Menta × Darius	Coqui
Don Moncho	Carnival × Flight of Birds	Coqui
Double Take	Mary Krull × Double Delight	Carmela
Dreamer's Quest	Dreamer × *equestris*	Paphanatics (Norman's Orch)
East Bay Splendor	Spring Splendor × Carmela's Spots	Zuma Canyon (L. Plank)
Elizabeth Ann Findley	Okee Snow × Hausermann's Goldcup	Breckinridge
Exotic Flame	Hausermann's Fireball × Exotic Dream	Hausermann
Falcon Valley	Silky White × Irene Valley	Y. Inada
Fancy Star	Plantation Moonglow × Magenta Star	Hausermann
First Dream	Silky White × Falcon Valley	Y. Inada
First Steps	Fledgling × Kathy Sagaert	Carmela
Freckled Delight	Brecko Pokonette × Soroa Delight	Carmela
Frozen Waterfall	Kathi Davidson × Prairie Du Chien	Hausermann
Garfield	Golden Omni × *venosa*	Coqui
Ginette Lapointe Aubry	Cassandra × Callicorne	Y. Aubry
Golden Legacy	Goldiana × Liu Tuen-Shen	A. D. Stock
Hawaiian Gem	Martha's Gem × Memoria Anna Ventosa	Zuma Canyon (Carmela)
Hawaiian Hula	Carmela's Dream × Anne Cavaco	Zuma Canyon (Carmela)
Hilo Dawn	Hilo Lip × Dawn Treader	Orchid Zone (M. Pendleton)
Himezakura Hosoe	Passion Talk × Monticello	R. Moriguchi
Ho's Fantastic Elise	Elise de Valec × Ho's French Fantasia	Tin-Fan Ho
Hot Country	Orglade's Hot Spot × Country Lights	Lines
Icy Waters	Frozen Waterfall × Ice Breaker	Hausermann
Imagination	Jutta Brüngor × Jean Dunn	W. Neptune (O/U)
Janette Gerrity	Lori de Valec × Elise de Valec	G. Daubenspeck
JoAnne's Mini	Cassandra × Penang	Paphanatics (Stewart Orch.)
Jordan's Pixie	Carmela's Pixie × World Class	Carmela
Kahori	*violacea* × Silky White	Y. Inada
Kate's Peppermint Candy	Victor's Stripes × Portobelo	W. Neptune
Kishwaukee Windsong	Cliff Wills × Ida Fukumura	Windsong
Knew It	Ida Fukumura × Neon Stripes	Carmela

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Laura's Berries	Berries 'n Cream × Show Lights	Lines
Lea's Charlie	Velvet Kiss × Spindrift	Hausermann
Leci Laney Croker	Golden Gift × Saint George	Breckinridge
Linda Anne Findley	Percy Porter × Donna Sitton	Breckinridge
Lin Yung An	Fortune Buddha × Mambo	Sogo
Long Dark Star	*amboinensis* × Lippeglut	L. Ngo
Lucinda Beneventi Findley	Freedom's Best × Katherine Frances	Breckinridge
Lunar Explosion	Zora Amato × Lunar Sunset	Gordon Heaps
Lunar Landing	Hausermann's Elite × Lightning Bolt	Gordon Heaps
Lunar Sunset	Lolita × Golden Buddha	Gordon Heaps (O/U)
Magic Windsong	Hausermann's Elite × *equestris*	Windsong
Malibu Junior	Miniflash × Be Tris	Zuma Canyon
Malibu Madonna	Sleeping Giant × Coeur Blanc	Zuma Canyon
Malibu Medley	Fifth Avenue × Massachusetts Stripe	Zuma Canyon
Malibu Melinda	Glad Melinda × Carmela's Pixie	Zuma Canyon
Malibu Memory	Persian Pink × Zuma's Pixie	Zuma Canyon
Malibu Rascal	Culiacan × Leucorrhoda	Zuma Canyon
Malibu Tidings	Tamarac × Florien	Zuma Canyon
Malibu Topaz	*venosa* × Nancy Reagan	Zuma Canyon
Manipalo	Manitoba × Palola	Kokusai (O/U)
Massachusetts Stripe	Carmela's Gem × Fifth Avenue	Zuma Canyon (A & P Orch.)
Memoria Alan Mork	Veitchiana × Schneewittchen	Gemstone (O/U)
Memoria Albert Licis	Perfect Choice × Lac La Nonne	W. Bohne
Memoria Charles Norris	Mitsuko Takasaki × Red Devil	G. R. Taylor
Memoria Chuck Slack	Orchidview Sunsplash × Misty Green	Gemstone
Memoria Donald Plank	Wataboushi × Pamela Gail	Zuma Canyon (L. Plank)
Memoria Ethel Berenberg	Orglade's White Rage × *venosa*	Gemstone (O/U)
Memoria Jeff Vernon	Welcome Home × Peter Stromsland	Gemstone (Hausermann)
Memoria Robert Rosenblum	Class President × *violacea*	Gemstone (Hausermann)
Miva Jazz	Golden Buddha × Miva Turner	Michel Vacherot
Miva Joie	Miva Mage × Arromanches	Michel Vacherot
Miva Mega	Brother Stripes × Mivac Carissimo	Michel Vacherot
Miva Menuet	Laurence Vacherot × Kyrielle	Michel Vacherot
Miva Rosaline	Zauberrose × Kyrielle	Michel Vacherot
Miyarabi Freed	Baby Hat × Matou Freed	K. Karasawa
Miyarabi Harmony	Freed's Lucky Star × Bonbori	K. Karasawa
Miyarabi Peach	Hinamatsuri × Morgenrose	K. Karasawa
Miyarabi Ruler	Hakalau Ruler × Morgenrose	K. Karasawa
Miyarabi Snow	*amabilis* × Awali	K. Karasawa
Miyarabi Star	Golden Peoker × Dame de Coeur	K. Karasawa
Moncho's Gold	Clash of Titans × *venosa*	Coqui
Nebula Astroids	Mahalo × Blushing Moon	Gordon Heaps
Nevada Gold	Memoria Regina Busse × Liu Tuen-Shen	A. D. Stock
New England Snow	Van Gogh × Hawaiian Clouds	V. De Rosa
N'go Butterfly	Carmela's Wonder × *philippinense*	L. Ngo
Night Out	Brazilian Connection × Carmela's Gem	Orchid Park
Ottawa	Cotopaxi × Massachusetts Stripe	Zuma Canyon (R. DeAngelis)
Pal Jerry	Palou × Jerry Host	Lines (Blue Grass)
Pisgah Maid	Angel White × Memoria Thekla Johnson	Owens Orchids
Pisgah Promise	Ai Gold × Royal Kathleen	Owens Orchids
Pisgah Showers	Morning Showers × Hakalau Spirit	Owens Orchids
Pisgah Tiger	Pacific Prelude × Golden Gift	Owens Orchids
Queen's Velvet	Carmela's Spots × Queen Touch	R. Vernon (Carmela)
Ralph Borders	*amabilis* × Glad Melinda	Paphanatics
Ramphis	Mendacea × *violacea*	H. Wallbrunn
Richard Degenhardt	Georges Seurat × Ho's Fancy Leopard	R. Degenhardt
Royal Mist	Royal Amboin × Misty Green	Breckinridge
Royal Windsong	Ana Hernandez × Royal Kathleen	Windsong
Ruby Butterfly	Butterfly Gold × Flor de Mato	A. D. Stock
Saigon White Clouds	Taisuco Bright × Carmela's Wonder	L. Ngo
Sarah Beth	Malibu Guide × Cast Iron Monarch	W. Neptune
Sarah Kimbrell	Crystal Things × Prairie Blush	J. Stubbings
Sarah's Smile	Berries 'n Cream × Jerry Host	Lines
Scott's Spot	Country Lights × Our Favorite Spot	Lines
Seto Pixie	*celebensis* × *tetraspis* †	Fuji Nurs.
Seto Snow	Ginrei × Mount Hiei	Fuji Nurs.
Sharpe Windsong	Alice Sharpe × Ruth Harpstead	Windsong
Signal's Light	Prairie Lights × Orglade's Hot Spot	Lines
Signal's Mist	Joseph Hampton × Memoria Vernon Schraeder	Lines (O/U)
Silky Dream	Carmela's Dream × Silky White	Y. Inada
Silky White	White Falcon × Persistent	Y. Inada (Y. Miyamoto)
Smokie's Golden Sunset	Golden Buddha × Petit Bois	L. Ellentuch (Riverbend)
Snowberries	Morning Showers × French Delight	Carmela
Sogo Ambo	Super Stupid × *amboinensis*	Sogo

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Sogo Ford	Fortune Buddha × Yungho Princess Gelb	Sogo
Sogo Gelbliambo	Taipei Gold × Yungho Gelbliambo	Sogo
Sogo Kaiulani	Princess Kaiulani × Yungho Princess Gelb	Sogo
Sogo Key	Taipei Gold × Yungho Princess Gelb	Sogo
Sogo Prince	Super Stupid × Yungho Princess Gelb	Sogo
Stock's Living Gold	Golden Amboin × Livingston's Dazzle	A. D. Stock
Stock's Sierra Sunset	Suziana Wijanto × Liu Tuen-Shen	A. D. Stock
Stone Little Princess	Kuntrarti Rarashati × Princess Kaiulani	Chen Gee-En
Stone Medal	Stone Concord × Deventeriana	Chen Gee-En
Stone Tact	Stone Bizarre × Stone House	Chen Gee-En
Stone Treva	Stone Sail × Deventeriana	Chen Gee-En
Summit Sun	*amboinensis* × Florida Snow	Breckinridge
Sunlands Bogus Gold	Golden Duplicate × Bogangar's Beauty	S. Heyden
Sunlands Hymark	Regal Dancer × Orglade's Springview	S. Heyden
Sunlands Mooneen	Sunlands Moon Dancer × Queenslander Queen	S. Heyden
Sunlands Pink Lime	Rose Rosette × Leucadia Dazzle	S. Heyden
Sunlands Pinstripe	Kathleen Ai × Leucadia Dazzle	S. Heyden
Sunlands Rainqueen	Queenslander Queen × Rainbow Blossom	S. Heyden
Sunlands Shadow	Moon Shadow × Memoria Fanny Patching	S. Heyden
Sweet Grass Buddha	Golden Buddha × Ewing's Treasure	W. Bohne
Ta Lin Freeds	Lien-Hung Lip × Chih Shang's Stripes	Sogo
Todd's Elite	Elite Image × Todd Carter	Hausermann
Troublemaker	Welcome Home × Hualien Honor	J. González (O/U)
Tutankhamen	Amun-Ra × Joey	H. Wallbrunn
Victor's Stripes	Imagination × Kathleen Ai	W, Neptune (O/U)
Vijayadashami	Ralphie de Vacherot × Aubrac	M. Arun
Virginia Bell	Snow Leopard × Hausermann's Goldcup	Breckinridge
Windsong's Baby	Dancing Windsong × Ida Fukumura	Windsong
Windsong's Cutie	Cassandra × Windsong's Gem	Windsong
Windsong's Spray	Ana Hernandez × Shirley Oppert	Windsong
Windsong's Stripe	Morelia × Hausermann's Chicago	Windsong
Windsong's Urchin	White Heat × Zuma Urchin	Windsong
Wise's Sergey Grinkov	Wise's Petrushka × Wise's Prince Dmitri	Mrs I. Wise
PHRAGMIPEDIUM		
China Dragon	Grande × *besseae*	Orchid Zone (M. Pendleton)
Grouville	Eric Young × Hanne Popow	E. Young O.F.
PLEIONE		
Callisto	Versailles × *yunnanensis*	K. Fairhurst
POTINARA		
Asahi Elegance	*Pot.* Dark Eyes × *Blc.* Mary Jane Kennicott	Fuji Nurs.
Fire Beat	*Pot.* Naokazu × *Lc.* Drumbeat	Minoru Ind. (Y. Ikumoto)
Golden Fortune	*Pot.* Lemon Tree × *Blc.* Malworth	Minoru Ind. (Y. Ikumoto)
Janet Elizabeth	*Pot.* Beaufort Gold × *Slc.* Orglade's Early Harvest	Gordon Heaps
Petite Canyon	*Sl.* Orpetii × *Blc.* Bryce Canyon	Minoru Ind. (Y. Ikumoto)
Rainbow Night	*Lc.* Tropical Rainbow × *Pot.* Tokyo Bay	Suwada Orch.
Royal Pixie	*Sc.* Rose Pixie × *Blc.* Royal Oaks	Minoru Ind. (Y. Ikumoto)
Sanyo Butterfly	*Sc.* Beaufort × *Blc.* Erin Kobayashi	Fuji Nurs.
Solar Green	*Blc.* Ports of Paradise × *Pot.* Beaufort Gold	Gordon Heaps
Solar Surprise	*Pot.* Beaufort Gold × *Blc.* Steve Stevenson	Gordon Heaps
Splendid Jewel	*Slc.* Jeweler's Art × *Blc.* Bryce Canyon	Minoru Ind. (Y. Ikumoto)
Tokyo Pearl	*Pot.* Tokyo Bay × *Blc.* Giant Pearl	Suwada Orch.
Vicky Pink	*Blc.* Vicky Gold × *Pot.* Tokyo Bay	Suwada Orch.
Victory Park	*Blc.* Satomi × *Pot.* Tokyo Bay	Suwada Orch.
Vivian Little	*Slc.* Helen Veliz × *Blc.* Delta King	J. L. Walker (O/U)
PTEROSTYLIS		
Jumbuck	*biseta* † × *woollsii* †	Nesbitts
Ruckman	*procera* † × Ingens	Nesbitts
RENANSTYLIS		
Fuchs Fire Cracker	*Rnst.* Queen Emma × *Ren. storiei*	R. F. Orchids
RENANTHOPSIS		
Carolina Peachy	*Ren.* Brookie Chandler × *Phal.* Hilo Lip	Breckinridge
Carolina Pinkbrook	*Ren.* Brookie Chandler × *Phal.* Hamptons Pink	Breckinridge
Carolina Toy	*Ren.* Brookie Chandler × *Phal.* Tinker Toy	Breckinridge
**SCHOMBOLAELIOPSIS (Smlp.)*		
Nice Cherub	*Lps. domingensis* × *Schom. tibicinis*	K. Arai

NAME	PARENTAGE	REGISTERED BY
SOPHROLAELIA		
Celebration	*L.* Ceres × *Soph. coccinea*	Haruo Sato
SOPHROLAELIA continued		
Kaybees Sun Imp	*Sl.* Orpetii × *L. harpophylla*	K. & B. Beale
My Friend	*Sl.* Psyche × *Sl.* Andrew Kanzer	Dogashima
SOPHROLAELIOCATTLEYA		
Best Friend	*Lc.* Drumbeat × *Slc.* Love Tradition	Dogashima
Cosmo-Art	*Slc.* Jeweler's Art × *C.* Loddiglossa	Kokusai
Joe Henricksen	*Slc.* California Apricot × *Soph. acuensis*	Fordyce Orch.
Jolie Gregory	*Slc.* Tangerine Imp × *Slc.* Wendy's Valentine	Harry Crosby
Jungle Charm	*Lc.* Auracharm × *Slc.* Adelyn O'Hara	J. Walters
Memoria Coleman Martin	*C.* Jane Chapman × *Slc.* Wendy's Valentine	Byrd's
Miura Princess	*Slc.* Miura Starbright × *Sc.* Beaufort	M. Inamine
Sierra Doll	*C. walkeriana* × *Slc.* Pink Doll	Gold Country
Star Girl	*Lc.* Citron Girl × *Slc.* Kauai Starbright	K. Arai
THELYMITRA		
Goldfingers	*nuda* † × *antennifera*	Nesbitts
Spring Delight	*nuda* × *rubra*	Nesbitts
VANDA		
Barrabui	Aurawan × Rasri Gold	A. Gibbard
Coqui's Blue Grape	Blue Kinzweiler × Charungraks	Coqui (Suphachadiwong)
Don Orlando	Meechai Blue × Doctor Anek	Coqui (Suphachadiwong)
Katie Caldwell	Pimsai × Fuchs Delight	R. F. Orchids
Lineu Robert	Pepe Sanchez × *coerulea*	R. F. Orchids
VASCOSTYLIS		
Margaret Sweany	*Ascda.* Blue Dreams × *Rhy. coelestis*	P. Sweany
VUYLSTEKEARA		
Für Elise	*Oda.* Durham Pride × *Odtna.* Durham Delight	Charlesworth Div. McBean's
WILSONARA		
Saint Britius	*Wils.* Dora Brown × *Wils.* Eve Burrough	George Black
Spencer Ryono	*Odcdm.* Ed Moore × *Oda.* Jack Halpern	R. Stone
YAMADARA		
Sawsan Sakallah	*Yam.* Elizabeth Kikuchi × *Epc.* Lemon Twist	Harry Crosby
ZYGOPETALUM		
Jumpin Jack	Skippy Ku × Artur Elle	R. Murray (Geyserland)

*New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Derosaara (named in honour of Victor De Rosa of Massachusetts, USA) = *Aspasia* Lindley × *Brassia* R. Brown × *Miltonia* Lindley × *Odontoglossum* Kunth
Estelara (named in honour of the late Doña Estela of the Dominican Republic) = *Brassavola* R. Brown × *Cattleya* Lindley × *Epidendrum* Linnaeus × *Tetramicra* Lindley
Schombolaeliopsis = *Laeliopsis* Lindley & Paxton × *Schomburgkia* Lindley

†Species appearing for the first time as parents in registration:
Calanthe alismaefolia: Calanthe alpina: Calanthe aristulifera; Calanthe discolor; Calanthe izu-insularis; Calanthe nipponica; Calanthe sieboldii; Coelogyne beccarii; Dendrobium bicaudatum; Dendrobium smilliae; Diuris sulphurea; Epidendrum capricornu; Epidendrum criniferum; Phalaenopsis tetraspis; Pterostylis biseta; Pterostylis procera; Pterostylis woollsii; Thelymitra nuda

§ First appearance of a natural hybrid as a grex parent in registration.

GENERAL CORRECTION
Calanthe triplicata is now the accepted name for *Cal. veratrifolia.* All past registrations have been corrected.

CORRIGENDA – Orchid Review list of:
May/June 1995, *Phal.* Memoria Dana Leppler: change to Memoria Dana Lepler
September/October 1995, *Den.* Paradise Uaemali: change to Paradise Vaemali

CORRIGENDUM – Sander's List of Orchid Hybrids 1986–1990
p.210, *Den.* Hachuko should read Hakucho

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Notes on the Orchids of New Guinea and the Pacific

Part 2

by Paul Ormerod

***Glomera* Blume.**

A mostly New Guinean genus of 50-80 species with about six of these in the Pacific. The flowers are very uniform, mostly white or yellow with a red or black tip to the labellum. Good identification characters can be found in external vegetative shapes.

Distribution: Papua New Guinea (New Ireland and Bougainville); Solomon Islands and Vanuatu.

Occurrence: Papua New Guinea. New Ireland, Hans Myer Ra., Mt. Angil area, 2000m, 20-10-1975, Sands 2259 (K no fls.).

Bougainville, Lake Loloru Crater, 1220m, 4-08-1964, Schodde & Craven 3749 (K, LAE).

Solomon Islands. Kolombangara: Mt. Kolombangara, 915-1525m, 31-08-1965, Hunt RSS 2482 (K); loc. cit., 1585m, 2-09-1965, Iras RSS 2501 (K); track from Vanga Point to Summit, 1500m, 31-10-1986, Wickison s.n. (K). Vanuatu. Ambae: above Mbangamera, 1310m, 23-11-1988, Wheatley 50 (K). Espiritu Santo: Mt. Tabwemasana, 1600-1800m, 4-09-1971, McKee RSNH 24167 (K); loc. cit., 1600-1700m, 4-09-1971, Veillon RSNH 4553 (K); loc. cit., 1830m, 3-8/09-1971, Chew RSNH 243 (K, NSW); loc. cit., 1800m, 2-09-1971, Raynal RSNH 16335 (K, NSW); Sakouy to Tabwemasana, 800-1550m, 24-10-1988, Cribb & Wheatley 100 (K).

Notes: This species has been called *G. papuana* Rolfe (Type: Giulianetti s.n. K), a true *Glomera* with ciliated leaf sheaths and not related to *G. distichifolia*. The former is distributed from Sulawesi to New Guinea, New Britain and New Ireland (usually above 1500m). *Glomera transitoria* J.J.Sm. and *G. connexiva* J.J.Sm. are later synonyms of it.

Glomera distichifolia appears to be related to *G. patens* Schltr. (Engl. Bot. Jahrb. 58:80, 1922) from Papua New Guinea but has narrower leaves than the New Guinean plant. Only a few specimens are available of what I believe to be *G. patens*. Here again the Pacific plants could also be considered a subspecies of a closely related New Guinean taxon. *Glomera distichifolia* is excellently illustrated as *"G. papuana"* by Sue Wickison in the Orchids of Vanuatu (Lewis & Cribb 1989) and the Orchids of the Solomon Islands and Bougainville (Lewis & Cribb 1991).

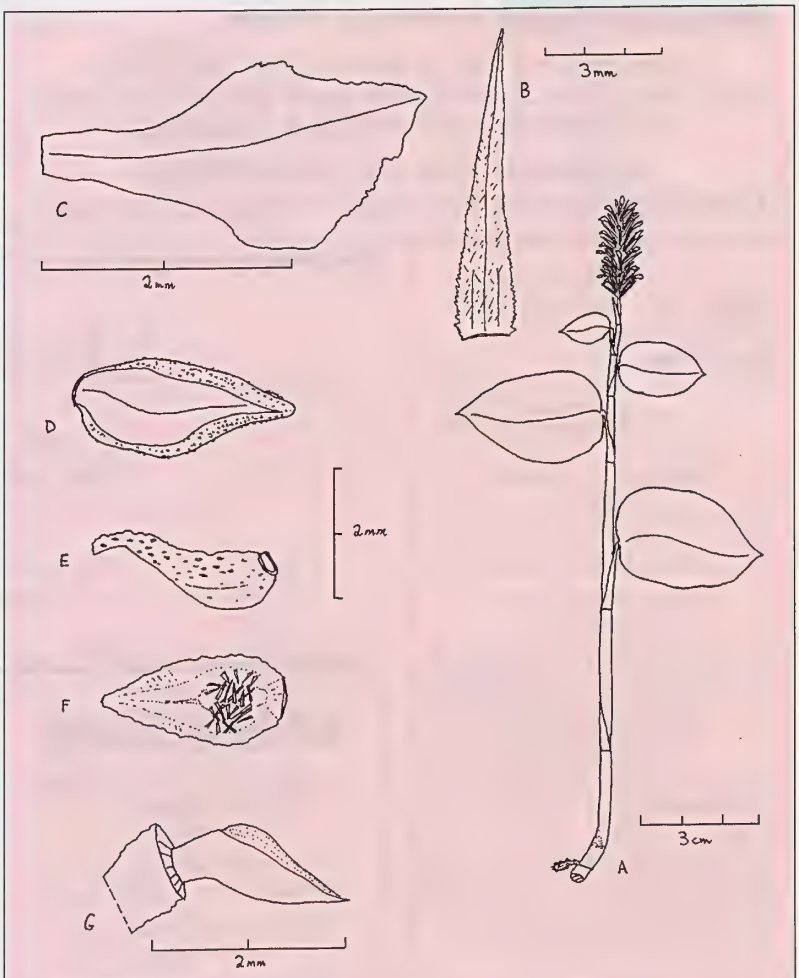
***Goodyera* R.Br.**

A world-wide genus with about eleven species in New Guinea and five in the Pacific, the latter area with only two endemic taxa. The plants are interesting because they have such variety in their leaf colouring. Leaves may be plain green, have a single white stripe or be reticulately veined with white to pinkish silver or gold. Flowers are generally small with segments 3-9mm long.

Goodyera callosa

J.J.Sm., Engl. Bot. Jahrb. 66:164, 1934.

Type: Dutch New Guinea. Wandamen,



Goodyera crocodiliceps – A. plant; B. floral bract; C. petal; D. lateral sepal; E. labellum from side; F. labellum from above; G. column; A, B, C, D-F and G respective scales. All from holotype Hartley 12508 (LAE).

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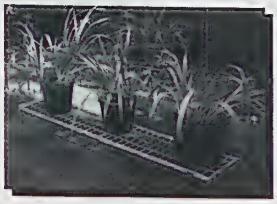
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AOR 049

Mt. Wondiwoi, 1850m, 10-07-1928, Mayr 347 (holo: L n.v.).

Distribution: New Guinea.

Occurrence: Papua New Guinea. Enga Prov., Porgera Distr., Teyenongo, 1800m, Reeve 4685 (K, LAW, NSW).

Notes: The above collection is a new record for Papua New Guinea. The plant has been distributed to herbaria as a *Hetaeria* species, which indeed it does somewhat resemble. Externally, it is easily recognised by the 30-40cm long inflorescence of many small flowers (tepals 3mm long). The column is usually abnormally developed.

Goodyera crocodiliceps
Ormd., sp. nov.

Typus: Papua New Guinea. Morobe Prov., Mt. Shungol, 8km SW of Wagua, 1830m, Hartley 12508 (holo: LAE).

Species nova affine *G. lamprotaenia* Schltr. sed caule paucifloiato et petala trapeziformis margine denticulata.

Terrestrial. Stem few-leaved, rooting at the basal nodes, terete, 13cm long. Leaves obliquely ovate-elliptic, acute, subsessile, green with a median pale streak, 2.3-4cm long x 1.3-2.3cm broad. Inflorescence terminal, 3cm long (peduncle 1.5cm long; rachis 1.5cm long), the rachis densely 20-flowered. Floral bracts linear-lanceolate, acute, margin serrate in basal third, externally pubescent, 8mm long x 1.5mm broad. Pedicellate ovary minutely verrucose, 5mm long. Flowers pale white, externally minutely papillose-pubescent. Dorsal sepal ovate-oblong, subacute, 3mm long x 1.5mm broad. Lateral sepals ovate-elliptic, obtusish, margins involute, 3mm long x 2mm broad. Petals trapeziform, obtusish, upper margins irregular-dentate, forming a galea with the dorsal sepal, 3mm long x 1.5mm broad. Labellum ovate, obtuse, margins undulate, externally with scattered verrucae, saccate in basal half, this sac with linear complanate appendages, 3mm long x 1.5-2mm broad. Column with elongate brachia, 1.5mm long; anther cordate-lanceolate.

Distribution: Papua New Guinea.

Notes: This new species superficially resembles *G. lamprotaenia* Schltr., but the latter has much leafier stems a sessile inflorescence and flowers with obliquely oblanceolate entire petals.

Goodyera erythrodoides Schltr., Fedde Rep., Beih. 1:49, 1911.

Types: Papua New Guinea. Kani Ra., 1000m, 05-1908, Schlechter 17748 (syn.: B — destroyed; isisyn.: K, NSW; L n.v.); near Albo, 400m, 07-1907, Schlechter 16293 (syn.: B — destroyed); Finisterre Ra., 1000m, 07-1908, Schlechter 17981 (syn.: B — destroyed).

Syn.: *Goodyera waitziana* Bl. var. *vitiensis* L.O.Wms., Bot. Mus. Harv. Uni. 5:111, 1938; *Goodyera vitiensis* (L.O.Wms.) Kores, Allertonia 5, 1:25, 1989.

Type: Fiji. Koko, 5-02-1934, A.C.Smith 1062 (holo.: AMES n.v.; iso.: K. BISH, NY, P. US n.v.).

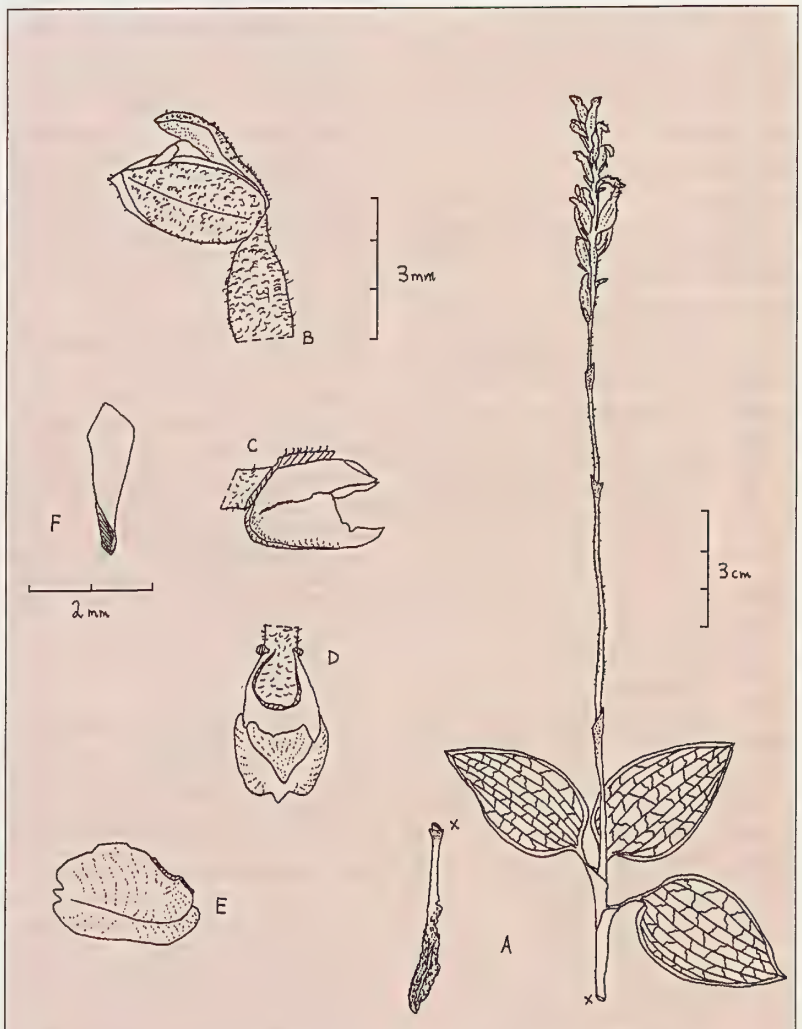
Distribution: Papua New Guinea and New Ireland; Solomon Islands; Vanuatu and Fiji.

Occurrence: Papua New Guinea. New Ireland, Kavieng, 5m, 13-07-1978, Rau 359 (LAE).

Solomon Islands. Guadalcanal: Mt. Chaunopaho, Cribb 5087 (K); Mt. Gallego, 855m, 7-07-1965, Dennis RSS 2057 (K, LAE). Kolombangara: river valley, 760m, 2-09-1965, Hunt RSS 2496 (K); loc. cit., 610m, 5-09-1965, Iromea & Hunt RSS 2545 (K). Ranongga: Reinona Village, Bagebagene Ridge, 450m, 14-11-1986, Mitchell 80 (K). Santa Isabel: Annardyce Harbour, 10m, 3-11-1967, Susui BSIP 8262 (K). San Cristobal: E of Warahito Rv., 610m, 1-08-1965, Dennis RSS 2288 (K).

Vanuatu. Pentecost, Tambok Village, 480m, 16-01-1989, Wheatley 116 (K). Fiji. Vanua Levu, Thakaundrove, Savu Savu Bay area, 0-400m, 26-12-1940 to 19-01-1941, Degener & Ordonez 13900 (K).

Notes: I have compared the types of *G. erythrodoides* and *G. vitiensis* and find them conspecific. No collections from Bougainville have been seen, the one listed by Lewis & Cribb (1991) belongs to *Rhomboda dennisii* Ormd. The record for Vanuatu is new, it was listed as *Goodyera rubicunda* (Bl.) Lindl. var. *rubicunda* by



Goodyera inmeghema – A. plant; B. flower; C. column and labellum from side; D. column and labellum from above; E. labellum from below; F. petal; A, B-E and F to respective scales. All from holotype Wheatley 777 (K).

Lewis & Cribb (1989). Kores (1989; 1991) discussed the differences between *G. vitiensis* and *G. waitziana* Bl. The latter was first described as *Salacistis novembrilis* Rchb.f., thus the following nomenclatural correction is necessary:

Goodyera novembrilis
(Rchb.f.) Ormd., comb. nov.

Basionym: *Salacistis novembrilis* Rchb.f., Xenia Orch. 1:214, T.87, f.1-4, 1856.

Type: Java, Mt. Salak, 2-4/11-1843, Zollinger 299 (holo: W n.v.).

Syn.: *Goodyera waitziana* Bl., Fl. Jav. Orch.:35, T.9d, f.2, 1858; *Orchiodes waitzianum* (Bl.) Kze., Rev. Gen. 2:675, 1891; *Epipactis waitziana* (Bl.) Eaton, Proc. Biol. Soc. Wash. 21:66, 1908.

Type: Java, sine loc., Waitz s.n. =HLB 15, 902-2406 (holo.: L [ph.]).

Distribution: Java and Sumatra.

Notes: J.J.Smith (Bull. Jard. Bot. Buitenz. s.3, 16:122, 1939) found *G. waitziana* and *Salacistis novembrilis* conspecific, but he never drew the nomenclatural consequences.

Goodyera inmeghema
Ormd., sp. nov.

Typus: Vanuatu, Aneityum, behind Anelgowhat, 340m, 16-11-1989, Wheatley 777 (holo.: K).

Species nova affine G. venusta Schltr. sed labello columna adnata et subtriloba.

Terrestrial, to 26cm high plant in fruit. Stem 3-4 leaved, 3.5-5.5cm long. Leaves obliquely ovate elliptic, acute, petiolate, dark green to velvety brown, reticulated with satin, reddish silver, pink or sparkling orange venation, 25-60mm long x 15-35mm broad; petiole 5-13mm long before dilating into sheathing base. Inflorescence terminal, 13-20cm long (peduncle 11.5-14.5cm long; rachis 1.5-5.5cm long), + successively flowered, eventually 20-30 flowered, white pubescent; sheathin bracts 2, remote, tubular amplectant, 12-15mm long; floral bracts cupular, ovate, acute, 2-3mm long x 1.5mm broad. Pedicellate ovary white pubescent, 3mm long. Flowers externally white pubescent, sepals reddish-green, petals white, labellum light reddish-green. Sepals elliptic, subacute, the dorsal one ca. 1/3 connate to the back of the column, 3mm long x 1.5mm broad. Petals ligulate-oblanceolate, obtuse, partly connate to back of column, 2.5mm long x 0.8mm broad. Labellum fleshy, connate to basal half of column, apparently without interior calli, trilobulate, lateral lobules erect and embracing column sides, apiculate, 2.5mm long x 1mm across epichile. Column with short brachia, 2mm long.

Distribution: Solomon Islands and Vanuatu.

Occurrence: Solomon Islands. Santa Cruz: sine loc., Hadley 47 (BM); loc. cit., Hadley 101A (BM).

Vanuatu. Aneityum: Anelgauhat Bay, 460m, 19-03-1929, Kajewski 946 (K); behind Angelwhahet, 130m, 10-11-1989, Lewis & McDonagh 160 (K); near hill top, Anelgauhat, 270m, 15-06-1896, Morrison s.n. (K). Vanua Lava: sine loc., 400m, Wheatley 357 (K).

Vernacular name: Inmeghem (Wheatley 777)

Notes: All the above collections are sterile and much resemble *Anoectochilus subregularis* (Rchb.f.) Ormd. in this state. Lewis & Cribb (1989) listed some of this material under the name *Goodyera subregularis* (Rchb.f.) Schltr., which I have above transferred to *Anoectochilus*. *Goodyera inmeghema* is similar to *G. venusta* Schltr. from Papua New Guinea, which also has beautifully coloured leaves. However *G. inmeghema* is distinguished by several floral details, it appears to be autogamous, the dorsal sepal and petals are partially connate to the back of the column and the subtrilobed labellum lacks internal setae and is connate to the basal half of the column. These features are not found in *G. venusta*.

***Phaius* Lour.**

Plants of this genus were once in demand horticulturally late last century, with even a few hybrids being made. Today *P. tankervilleae* (Banks ex L'Herit.) Bl. is still occasionally grown. There are about six species in New Guinea and five in the Pacific, most of these are shared.

Phaius montanus Schltr., Fedde Rep., Beih. 1:374, 1912.

Types: Papua New Guinea. Finisterre Ra., 01-1909, Schlechter 19135 (syn.: B — destroyed; isosyn.: AMES, L, S n.v.; NSW); Schlechter 20084; 17348; 19596 (syn.: B — destroyed).

Distribution: New Guinea and Bougainville.

Occurrence: Papua New Guinea. Bougainville: Pavairi, 855m, 16-01-1967, Ridsdale & Lavarack NGF 30579 (K, LAE); Pavairi, 900m, 15-01-1967, Ridsdale & Lavarack NGF 30567 (K, LAE).

Notes: Despite the poor condition of the Bougainville material, I believe it should be referred here rather than to *P. tankervilleae* (see Lewis & Cribb 1991). There are now no herbarium collections of *P. tankervilleae* from the Solomon Archipelago. *Phaius montanus* can be recognised by its strongly three-lobed labellum joined to the column for about 1cm; in *P. tankervilleae* the indistinctly-lobed labellum is nearly free from the column.

Phaius robertsii F.Muell., South. Sci. Rec. 3, 12:265, 1883.

Type: New Caledonia. ex cult., Layard s.n. (holo.: MEL).

Syn.: *Phaius monticola* Guill., Not. Syst. 10, 2:71, 1941.

Type: New Caledonia. Koghis, 12-1905, Le Rat 2742 (holo.: P n.v.).

Distribution: Vanuatu; New Caledonia and Fiji.

Occurrence: Vanuatu. Aneityum: N from Anelgauhat, 270m, 15-06-1896, Morrison s.n. (K). Vanua Lava: sine loc., 550m, Wheatley 363 (K). Fiji. Viti Levu: Rewa Prov., Vesari Swamp, 27-05-1905, Im Thurn 43 (K).

Notes: A nice photograph of this species appears in the New Caledonian Orchid Society's "Native Orchids of New Caledonia". The record for Fiji is new, Kores (1991) inexplicably listed the relevant collection as *P. tankervilleae*.

• *Part 3 will appear in the December 1996 issue of "AOR".*

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Cattleyas

Now winter is over the plants can be given a good clean up. Check for scale insects on bulbs. Use one of the oils to control. Look for soft bulbs, if soft check for root damage. Maybe roots are dead. If so repot into fresh mix or into *Sphagnum*. Use either N.Z. PELLETS or AUTOMOSS. Do not fertilize sick plants. If plants are overgrown wait for active root action before dividing. use DEBCO bark to repot your catts. Most growers use coarse or extra coarse to repot in. Give plants plenty of air and enough light to give the leaves a nice yellow-green colour. Stake plants well after dividing to make the plant stable. *Do not fertilize* until growth is evident. *Most important do not over water newly potted plants.*

Cymbidiums

How many of you growers out there flowered seedlings this year? Have some of the seedlings produced better flowers than your collection plants? It is through growers who hybridize and flower seedlings that the quality of our *Cymbidiums* continue to improve. Do yourself a favour and go out and buy a few seedlings. Most of our orchid nurseries stock some of the latest cymbidium seedlings. If you flower a seedling that is above average, take a photo of it and then send it off to our editor with a short note regarding its parents, time of flowering, culture etc.

Now is the time to repot – divide overgrown plants. Do not water plants for at least three or four days before dividing. If plants are too wet it makes it harder to divide them. Do not divide the plants into too small divisions. Keep plants in at least three or four bulb divisions. After repotting give plants a good soaking and then a drench with a good rooting hormone. Do not water for at least seven days.

Many growers drench their plants with FONGARID® or FOLI-R-FOS® after repotting to keep root and bulb rots away. Don't forget to seal cuts with STERI PRUNE®.

Fertilizing can be commenced three or four weeks after dividing. Use H-S-O 22 or if you are into organics use GARDEN PARTY or FISH EMULSION.

Pests are now starting to come out of the woodwork. Two spotted mites should be kept in check. Use NATRASOAP® plus SPRAYTECH OIL® make sure you apply all over the plant including *under the leaves*. ROGOR® and FOLIMAT® can also be used. If you have a large collection OMITE® could be the way to go. Watch for black spot. Use MANCOZEB®, DACONIL® or your favourite fungicide. Use monthly during the spring, early summer period. If the product says use a wetting agent use W-A100.

Watch out for Western Flower Thrip. Use sticky traps to monitor pest populations. If stray insects appear take traps to your agricultural extention officer for positive identification. He will advise on what steps to take to control the W.F.T.

Watch your watering during spring. Depending on your climatic conditions, weekly should be sufficient.

For further information join your local Cymbidium Society.

Masdevallia

Flowering throughout most of Australia should now be well underway, although, many collections in the Southern states will be held back a bit and for many there will be the disappointment of no flowers, because of losses caused by the extreme cold snaps of a few months back.

Maybe now is the time to think about a little Winter warmth, or at least a heat pad or two for next year.

As temperatures rise we will also see a rich assortment of pests arriving, all endeavouring to undo the years work. Snails and Slugs cause most of the problems and for many of these slimy species, the flowers appear to be their delight. If control is not implemented, complete blooms can disappear in a nights feeding. My experience indicates that Metaldehyde dust, lightly applied is a complete control, sprays such as Mesurol® provide an alternative where the powder is not available, it is banned in some stated. Hard baits such as Baysol® or Defender® give moderate protection. Nothing, of course, takes the place of nightly inspections for pests before retiring. Look for Mesurol wettable powder which is also a bird repellent.

While not a major pest, caterpillars can sample *Masdevallia* leaves if nothing else is on offer. I recommend Orthene® as a broad spectrum insecticide but Carbaryl® and other wettable powders, should provide good defence. Avoid liquids as the petroleum bases of many, can burn new growth.

As the sun rises towards its annual zenith, shade will need to be applied. 70% is the minimum for the South of the continent while those under glass in the North will require an application of glass house paint as well. Don't be too hasty with the application of shade in the south though as the really warm and bright weather does not NORMALLY arrive until after Xmas. December is also a good time to think about getting those new seedlings out of flask, so that they may stabilise before the really hot dry weather arrives.

Strategy for those areas with extremely hot dry Summers should be in place. S.A., N.S.W., Q'LAND where it is not humid, and W.A. will benefit from water coolers while VIC. and TAS. may just stage the plants outside and low on the benches, in a protected Fernery type situation, with misting.

At this time, air circulation in any position should be noticeable while maximum temperatures must not exceed 30°C. with 25°C. being the ideal. If cultural conditions are correct, red spider will not be a problem. Divisions can now be taken so that they establish before the hot weather arrives. To leave this type of propagation until mid summer nearly always results in the death of those divisions. Six to Ten leaves should be the minimum division size. Those growers wishing to create spectacular specimen plants may repot into the next largest container at this time. Add extra drainage holes to new pots and add stone, to the bottom, as both a crock and as balast. I do not recommend the addition of slow release fertilisers.

As the weather warms up, watering may be on a daily basis with weak fertiliser through a proportioner, being applied one or two times per week. *Masdevallia* and the *Pleurothallid* group are not heavy feeders so do not overdo it!

Look out for thick accumulations of mosses and algae atop the moss if this is your medium. Remove this growth and loosen up the top layer to both aerate and allow better water penetration for the summer. Replace soggy, dead brown moss, with fresh. Do not allow water to remain in the centre of new growths as they rot off easily during warm weather.

Natives

Now that the blooms are fading from many natives the work begins because this is repotting time.

It is best to pot on and repot in the warmer months just as active growth gets underway. This gives root systems the chance to establish in new mix and to expand undisturbed, making the most of the nutrients.

You may ask "Do I need to repot every year?" The answer is no for most plants but you should check a number of things each year. These include:

- Do the plants still fit comfortably to slightly potbound in their pot?
- Are they growing well producing strong new growths?
- Is the mix still chunky or has it begun to turn to fine mush? You may have to carefully tip the plant out to have a peek at the roots and mix. This should be fairly easy to do/
- Small seedlings should be repotted.

Keep an eye out for the root chewers – worms, slugs, slaters and similar fry. I have noticed that slugs simply love to live in the spaces created by chunks of bark – dark and moist with a ready supply of food in the form of roots. Many people don't realise that worms are a problem in pots. After all they are the best thing a healthy garden can have! However, in the confines of a pot the organic matter they need soon disappears and they start chewing on roots. if pots are on the ground they can come and go freely and may not do too much damage, but in pots high up on benches they can't escape. How do you get rid of them? Remember how worms are seen on paths after heavy rain? They can be removed by submerging the pot completely in water and soaking for a few hours or overnight. (Take the opportunity to introduce some dilute fertilizer or to adjust the pH). Just scoop up worms floating on the surface but be sure the little ones go too or you will soon have another generation. A good soaking can upset other unwanted inhabitants as well but slugs are best treated to snail pellets.

The mix

Now for the big question – what do you pot orchids in (besides plastic pots)? The contents of potting mixes varies from grower to grower and even between types of plants. Terrestrials are grown in special dirt-like media but the epiphytes are usually grown in a bark-based mix. The most commonly used bark is small chunks of pine bark. It is usually readily available and fairly cheap. However the quality varies. This ranges from clean, treated bark to clean untreated or rough chunks with bits of wood mixed in. Treating involves soaking the bark with some chemicals so that the toxins in the fresh bark are removed and the pH to can settle at a level which suits orchids. Any bark you use should be free of dust and of fairly uniform size as the bark size is chosen to match the pot and plant. In general, small bark (to about 10mm) is used in seedling pots. This size retains more moisture in larger pots and should only be used if your conditions are dry or the plant likes a more moist root system. Remember that the small particles will pack tightly and reduce air movement. Medium sized bark (around 10-20mm) is suited for the majority of plants and pots. It is small enough to retain moisture in small to medium sized pots but allows plenty of air movement. Coarse bark is great for those big pots of specimen plants and the large members of the *Dendrobium speciosum* complex.

If you decide to treat your own bark, speak to

local growers and find their sources. The chemicals used vary from grower to grower but it takes at least a month to fully prepare bark before plants can be potted. The smaller bark is quicker than the large chunks. Rinsing is important to remove excess chemicals and dust. The chunkier the bark the bigger the air spaces so stay clear of thin flakes.

Do not use bark that stains water red.

There are many additions to the basic bark used by growers. These are sometimes locally available materials and their worth can be the subject of heated discussion. Additives include charcoal (not fresh but horticultural grade), pebbles or gravel, peanut shells, rice hulls, shellgrit, perlite, vermiculite, scoria, peat moss and polystyrene balls. Some of these are small particles which will rot quickly while others are inert and will retain air pockets when the bark rots. By all means experiment, it is the only way you will find the best mix for your conditions, but do not repot the whole collection into a new brew without first checking it on a few plants for a year to see how it stands up and to check for any detrimental effects. Stick to a basic mix in the meantime and keep an eye on the pH. Some types of plants love some additives while others won't tolerate them for an instant. Find out what you can about the natural habitat and develop your mix accordingly.

Repotting

When repotting set up an area to work where the inevitable mess won't be a problem. use plastic dishes to hold the mix and pot and reduce spillage. I like to use an old spoon to put mix into small pots, a small pot for larger ones. Rubber gloves are a great way to protect your hands as the bark is very rough and will quickly crack the skin on most fingers. To repot gently ease the plant from the pot by tapping the bottom. For a root-bound subject a good squeeze of the pot may be needed. use your hands for small plants or lay it on its side on the ground and use your foot if it is too big. Don't pull the plant out by the top.

Once the plant is out see if it needs to have the mix removed and the root system trimmed (repotted) or can it just go straight into the next pot (potting on)? Dead roots and mushy mix should be removed. Since developing an interest in bonsai I have found a wonderful tool for this. Take a wooden chopstick and sharpen it with a pencil sharpener. it is strong and great for teasing out roots without damaging them. It can also be used for skewering caterpillars, aphid and spiders, cleaning out dropped leaf matter from the top of pots, separating seedlings from agar, planting seedlings and I'm sure many other uses I haven't discovered yet. Make up a few. They're great.

When choosing pots keep in mind that natives like to be crowded or underpotted. Leave enough room for the expected growth of a season or two if it is a large plant. Seedlings are best repotted regularly to keep them moving. There are excellent squat pots available now with wonderful drainage.

Once you have cleaned up the plant and chosen the pot, hold the plant in position so that there is room for the new growth between plant and pot edge. Carefully pour mix around the roots and be sure to settle it in well. use the bonsai tool (this was its original purpose). Be sure to keep the mix at its previous level. Rhizomes should just sit on the surface. Monopodial plants such as Sarcanthinae can be sunk a little lower if there are new roots but remove any leaves that will be below the surface.

Finally a good drink of fresh water.

Fertilizer

With the growing season comes the need to fertilize. Like potting mixes there are many plant food combinations. Feeding is necessary in an organic mix as the "bugs" responsible for the composting process compete for nitrogen. use a complete fertilizer at half to quarter strength. These fertilizers have trace elements. Organic fertilizers are also fine but check the label to ensure your plants are getting a complete and balanced diet. Overfeeding can cause the decline and death of plants so stick with the "a little but often" approach. It is a good idea to give plants a thorough soaking with fresh water every few weeks over the peak feeding time. This will flush by-products from the mix and hopefully slow pH changes. It probably won't get rid of the lot (either more chemicals or a repot are needed) but it should help. Slow release fertilizer added to the mix or spread around the top of the pot is also used. This is often essential for growers who don't have the time to feed as regularly as they like. Again read the label and use only a small amount. Animal manure can be very potent and may burn roots if not carefully applied.

Mounted plants will obviously need fertilizer applied regularly as there is no means of storing it around the plant.

This is the peak flowering time for the Sarcanthinae and this year should see yet more interesting new flowers from the latest breeding. To keep blooms fresh avoid overhead watering and try to keep flowers out of the rain.

Don't forget to care for those not so showable species plants you may have. Any plant which originated in the bush but should be treated with care. Our orchids are becoming fewer in the natural habitat and maintaining genetic diversity is important. Hybrids can be remade anytime – but if there are no species. I mean bush originals not the new, superimproved forms around now which are probably best considered hybrids genetically. So if you have been given bits of plants which came from the wild days before restrictions, label them with what you know and take care of them.

Paphiopedilum

A little care is necessary during spring as the weather can be quite variable. We generally have nice warm days and cool nights) ideal conditions for paphs. to begin their main growth cycle.

Repotting was covered fairly comprehensively in the notes for July/August, however a few points are worthy of repetition:

Paphiopedilums thrive on repotting. It should be done every year for best results, no matter how happy the plant appears or how good the mixture looks. You can only see the top of it.

Don't overpot. Use a pot which will comfortably hold the roots. 'Squat' pots (height about equal to diameter) are best and drainage must be adequate. The base of the plant should be just below the surface of the mixture.

'Wobbly' plants should be staked.

Don't use Osmocote. It is just great for most orchids but paphs. will not grow a good root system when it is used.

Repotting can be continued throughout this period – in fact, right up until about mid December, or later if you have effective cooling.

Watering should be done as required. If the weather is hot and dry you may need to water every couple of days; if cool and cloudy, once a week may suffice. It is particularly important to water in the morning if you possibly can. The object is to keep the soil temperature up; you can't achieve this if you water late in the day.

Fertiliser should be given regularly, particularly toward the end of this period. It is not too much to water with about half strength fertiliser every second or third watering. I find it very convenient to use a 'Hyponex siphon mixer', which plugs in at the tap end of the hose and sucks the concentrated fertiliser out of a 20 litre bucket. These are cheap and foolproof but they won't work against a lot of back pressure; I use a 'Gardenia' water breaker, screwed well out, on the end of a 20 metre hose and have no trouble.

I have always used Aquasol, supplemented with extra iron, a bit of magnesium now and then and Nitrosol which, apart from its value as a fertiliser, I believe acts as a wetting agent. Whilst I never really measure anything, the proportions are probably about: 2 teaspoons of Aquasol, 1 teaspoon of Nitrosol, a pinch of Iron Chelate and a few pinches of Epsom Salts all dissolved in about 20 litres of water. This a pretty weak, but I use it frequently.

About the only pests which trouble paphs. are scale and mealy bug. These become active around early November and it is not a bad idea to spray the collection during this month as a preventive measure. Malascale will clean these up fairly effectively. If you feel really heroic, Supracide is very effective. Whatever you use, take the appropriate precautions otherwise you may clean up the family dog, or even yourself.

Phalaenopsis

Watering:– Water only in the mornings every second day. If weather really starts to warm up then water daily. Damp down floor every day.

Light:– Shade should be increased to 90% until after the end of summer.

Fertiliser:– Fertilise weekly alternating between

- High nitrogen (Campbells B, Aqua Feed, etc.)
- Foliar/Trace Elements (Wuxall)
- Organic (Fish Emulsion, Nitrosol, Maxicorp)
- Phostrogen.

Pest Control:– Fungicide every six weeks with Ridomil MZ WP, Daconil, or Mancozeb with Kocide.

Use Malathion or Pyrethrum every four weeks to control insect pests.

Keep a particular watch for mites and use a miticide as necessary.

Good air circulation is essential to prevent fungal rots.

Vandaceous

Watering:– Water daily. Keep the root system moist with additional misting if necessary.

Light:– Strap leaf vandas and ascocendas need 50 to 70% shade. Terete and semi-terete between 30 and 50%.

Fertiliser:– Fertilise weekly alternating over a four weekly period –

Wk. 1. – Inorganic high nitrogen (Campbells B or Aqua Feed)

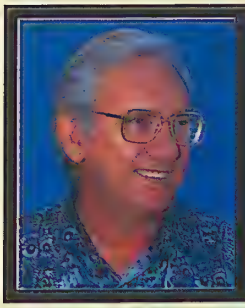
Wk. 2. – Foliar/Trace Element (Wuxall Foliar)

Wk. 3. – As for Wk. 1

Wk. 4. – Organic (Fish Emulsion, Nitrosol)

Pest control:– Fungicide every six weeks (e.g. Ridomil MZ WP, Daconil or Mancozeb).

Use Malathion or Pyrethrum to control insect pests.



Cymbidiums Australia

Presented by the Australian Cymbidium Society Inc



Editor's Report

Our Forebears

Let us take a little time to thank those who pioneered the way for the wonderful lifestyle we are privileged to experience in this great country of ours. For those long since gone, who came to Australia for various reasons. Let's thank those who came to improve their lifestyle... who came to escape religious persecution... and even those who for the sake of a stolen loaf of bread, have opened the doors to a better way of life for their descendants.

The ways and means by which we were introduced to, or became enthralled in our orchid growing vices are many and varied. Perhaps an Orchid Show in the local shopping centre... or smitten by that captivating "beauty" in the garden centre – a chance meeting with someone in the "know", who just happened to be passing by as you ratted through your pockets for that last dollar coin to pay for it, and guess what? They can actually tell you how to grow the thing, if you have an hour to spare!

In the past seven issues of Cymbidiums Australia we have brought you a number of articles acknowledging those who have pioneered the "orchid world". It is our intention to continue to bring you stories of such people, for they are the forebears we must thank for giving us the opportunity to enjoy this wonderful hobby of ours.

From the pen of Everett Stockstill, President of the Torrance Cymbidium Society, in California, U.S.A. we bring you the life story of the late James Toya. An intriguing orchid grower, James was an amateur hybridist of unquestionable talent. A person who introduced many to his fascinating world of orchids, a humble man rightfully acknowledged by one who held him in high esteem.

We take another step back into history, this time with Peter Rochfort, our New South Wales Editor, and look at the profile of a great Sydney Show Grower, Dr. Jim Burstal. This is a story which takes us back to some of the earliest days of cymbidium growing in Australia. How privileged we are to have such stories told, thank you Peter.

Clive Halls brings us another helpful cultural article, this time on recycling pots, while Bill Johnson unravels the question on ploidy of cymbidiums, a complex matter for both beginner and experienced growers alike – yet one we should all endeavour to understand.

Finally, Deng Shiya and Neil Hallam from the Department of Ecology and Evolutionary Biology at the Monash University, Victoria, give a scientific analysis of artificial pollination of *Cym. canaliculatum*.

Dean Roesler
Editor

President's Report

Our Future Pathway

Given the production deadlines of the Australian Orchid review, your editor Dean Roesler and I find ourselves writing material for this October edition in mid-August. For this reason we are unable to comment on the success (or otherwise) of the inaugural National Show held in Ararat. I think it is pertinent to repeat some of the points that I will make in welcoming delegates to the Show. Our committee will measure the success of this Show based upon the following objects:

(1) Considerable participation by exhibitors from each of our member states.
(2) A large attendance by the general public to view the Show.
(3) A weekend that enables cymbidium enthusiasts to mix and enjoy each others company in a relaxed social environment.

It is essential that we succeed in each of these objectives – in October 1996 the National Committee meets in Adelaide to review these outcomes and set in place the necessary guidelines to ensure that future National Shows equal and even improve upon the Ararat Show.

Many no doubt have asked the question, "where to now?" As a rule of thumb next year's Show will be held in either South Australia, New South Wales or Western Australia, in line with our initial decision that this event rotate from year to year. Nevertheless, each state will be required to meet a minimum set of criteria for staging the National Show – this, will be agreed upon by delegates at our October meeting, and each state Cymbidium Club advised immediately. Thereafter each state is invited to submit their proposal to the February National Committee meeting, with the host state selected from:

(1) The best proposal submitted from S.A., N.S.W. or W.A.
(2) Should S.A., N.S.W. or W.A. not submit a proposal that meets the adopted criteria, then Victoria's bid will be considered.

What are "the criteria" likely to be? Without pre-empting committee's decision on this matter, commonsense suggests that we would be looking to at least matching what has occurred at Ararat. Moving forward, endeavouring to ensure that our National Show is the most prestigious orchid event on the Australian calendar.

The October meeting also represents the inaugural Annual General Meeting of our Society – time for some naval gazing, but more importantly a forum to identify where we intend to journey over the next twelve months.

Graham Guest
President

"CYMBIDIUMS — KING OF THE ORCHIDS"

South Australian Club News

During a flowering season which has been quite variable throughout South Australia many beautiful plants have been exhibited at monthly meetings. Many of these have been most impressive, with considerable numbers being shown as quite large specimen plants. The plants shown here have gained the following awards and accolades.



July 1996 Orchid Of The Night *Cym.* Fair Delight 'Polar Bear'. Owned by Guest Orchids. Photo: Peter Aigner-Muehler



Cym. Ruby Parker '105' CE/CCSA. Owner/Photo: Guest Orchids. Parentage: Ruby Eyes x Nosey Parker. Hybridiser: Guest Orchids. Granted a Commendation for Excellence Award 26/6/96



Cym. One Tree Hill 'Doris' CE/CCSA, CPP/CCSA. Owner: Sims Orchids – Moss Bray. Parentage: Coraki x Dolly. Hybridiser: Geyserland Orchids. Granted a Commendation for Excellence Award 26/6/96. Granted a Commendation for Pot Plant Award 26/6/96. Photo: Peter Aigner-Muehler



Cym. Hocus Pocus '105' CE/CCSA. Owner/Photo: Guest Orchids. Parentage: Showoff x Red Valley. Hybridiser: Guest Orchids. Granted a Commendation for Excellence Award 24/7/96



Cym. Waringah Claret 'Kelly Lee' CPP/CCSA. Owner/Photo: Malcolm Osborn. Parentage: Jessie Blakison x Kiata. Hybridiser: Lee's Orchids. Granted a Commendation for Pot Plant Award 24/7/96



Cym. Waringah Claret 'Daisy Harding' CPP/CCSA. Owner: Malcolm Osborn. Parentage: Jessie Blakiston x Kiata. Hybridiser: Lee's Orchids. Granted a Commendation for Pot Plant Award 24/7/96. Photo: Peter Aigner-Muehler



2nd Quarter Winner – 1996 Cymbidium of The Year. Cym. Bethlehem x Pendragon. Owner: Sims Orchids – Moss Bray. Also judged Orchid Of The Night May 1996. Photo: Peter Lagner-Muehler

Club News from N.S.W.

In June 1996, the Cymbidium Club of Australia staged its first display as an affiliated Society at The Orchid Society of New South Wales Winter Show. The event was held at Roselands Shopping centre in Sydney's southern suburbs, the usual venue for this show.



Cym. Lady Angela 'Tiara' owner Greg Bryant

The morning of Sunday June 9th revealed a scene of frenzied activity at Roselands, with members of various affiliated Societies scrambling to complete their displays in time for the judging. A chaotic scene of people and plants gradually evolved into a spectacular array of rainbow coloured displays.

Support by Cymbidium Club members for our first display in a New South Wales Orchid Society Show was excellent. A number of members gained placing's in various categories with plants exhibited in the Cymbidium Club display. As many members also belong to other orchid societies, several were successful in various categories in other displays, as well.

The Cymbidium Club display was judged 5th from among nine displays in the 12 square metre Affiliated Societies category, a pleasing result for its first effort. Champion Standard Cymbidium and Best Cream or White Cymbidium was won by Cymbidium Club member Tony Maclure with *Cym.* Poetic Winter 'Carolyn', a full shaped white flowering from a small plant. It was exhibited in the North Shore Orchid Society display.

Neville and Judy Schaefer won Champion Intermediate Cymbidium Hybrid, Best Red or Pink Intermediate Cymbidium Hybrid and Best Intermediate Cymbidium Seedling with *Cym.* Bewitched Baker x Lancashire Rose, exhibited in the Cymbidium Club display. The Schaefers also won Champion Miniature Cymbidium Hybrid with *Cym.* [(Beacon Fire x Greenoaks Gem) x Pink Peach], in the Parramatta Orchid Society display.

Champion Seedling of the Show was won by Greg Bryant with *Cym.* Lady Angela 'Tiara', which also won Best Standard Cymbidium Seedling. Greg's Cym. Khan Flame 'Sheena' won Best Red or Pink Standard Cymbidium Hybrid and was awarded an HCC by the Orchid Society of New South Wales. Both 'Tiara' and 'Sheena' are progeny of the red *Cym.* Yowie Flame 'Krakatoa', which has produced a succession of high quality seedlings in strong red and brown tones.

by Peter Rochfort
Editor, Cymbidium Club of Australia



Cymbidium Club of Australia Display

STATE EDITORS

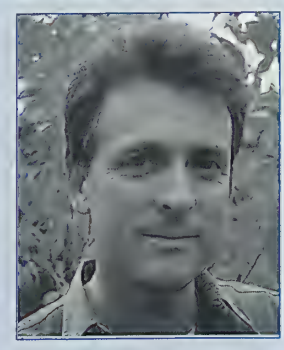
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Vale - Dr. Miles Seton

Cymbidium lovers will be saddened to hear of the death of Dr. Miles Seton, who passed away peacefully in his sleep in the early hours of the 1st August 1996. A dedicated, well respected and much loved Doctor, Miles retired and moved to Bermagui in 1972. He gained untold pleasure from growing and hybridising his cymbidium orchids, especially from his *Cym. suave* hybrids, for which he gained world recognition.

From the clifftops overlooking the Bermagui coastline, I was privileged to spend many hours during the past two years with this wonderful, quietly spoken gentleman, and to even have an orchid named after me by Miles. On behalf of those who were honoured to be his friends and will sadly miss him, may I say, "Thank you for the memories".



Dr. Miles Seton

I shall pass through this world but once; any good, therefore, that I can do, or any kindness I can show to any human being, let me do it now. Let me not defer it, or neglect it, for I shall not pass this way again.

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James Toya – "Sensei"

(January 4th 1916 - December 27th 1993)

by Everett Stockstill

Throughout all of our lifetime, we encounter many different types of people, and every so often we meet someone who truly makes a difference. James Toya was that kind of person. He humbly presented himself as he shared his extensive knowledge of hybridising and cultivating cymbidiums. He was widely known for hybridising reds, but more importantly, he was known as "The Sensei" to many of us here in the greater Los Angeles area. James Toya was our teacher. Over the years, I spent many, many Sunday afternoons, in his backyard, listening and learning from him.

James Tatsuo Toya was born on January 4th 1916 in Walnut Grove, California, U.S.A. Shortly thereafter his family moved to Salinas, California. At the age of five, he went to Japan, where he lived on a farm for the next eleven years. It was here that James learned to write and speak the Japanese language. He was reunited with his family in Salinas at the age of sixteen, when they opened a gasoline service station. A few years later James moved to the Los Angeles area, where he found employment at the TNT Gas Station.

At the onset of World War II hostilities, James and his family, like so many others of Japanese descent, were sent to a relocation centre at Poston Camp, Arizona. He and his family lived in a tar and paper covered barracks until the end of the war.

Upon returning to West Los Angeles following the war, his family opened a small food market on Sawtelle Boulevard. James met his future wife, Marie Yoshikawa, in 1947, and they purchased their permanent home on Purdue Avenue 46 years ago. His vocation as a gardener in the Beverly Hills and Laurel Canyon areas introduced him to the world of cymbidium orchids.

James would constantly search the local nurseries for cymbidium plants. As he often stated, "cymbidiums were very expensive in those days." By 1960 he had acquired and was happily cultivating about 100 cymbidiums in his backyard growing area. With this increasing interest in cymbidiums, James began attending meetings at the Cymbidium Society of America (CSA), Westside Branch in 1970, and became a member of their Board of Directors in 1975.

In the early 1970s, his interest in hybridising cymbidiums opened doors to many, many of the beautiful blooms we all enjoy today. His first successful hybrid was a cross between *Cym.* Cleo Sherman 'Marie' and *Cym.* Louis Sander 'Braemar', which he named after his daughter, Brenda (*Cym.* Brenda Toya 'Bicentennial' received a CSA Bronze Award on 5/5/75). In fact, many of the crosses James hybridised carried varietal names of his beautiful daughters Brenda, Janis, Jo-Anne and Gail, plus his wife Marie. Another favourite varietal name he used was Tamiko, his granddaughter.

James received the Cymbidium Society of America Trophy a total of five times in recognition for some of the cymbidiums he hybridised. This trophy is awarded annually to the amateur who receives the highest point score for a standard cymbidium, which has been grown for at least six months in California, with the cross being properly registered. *Cym.* Brenda Toya 'Bicentennial' (Cleo Sherman x Louis Sander) was the first in 1976 with a points score of 79.02, for a CSA Bronze Award. *Cym.* Sawtelle 'Gail Toya' (Pearl Easter x Lunagrad) was the second, in 1978, with a score of 76.91





Top: THE TEACHER AND HIS PUPILS. James Toya (in front) with members of the Torrance Cymbidium Society (back, left to right), Everett Stockstill, Bert Tagami, Shogo Sato and Stan Noguchi. This photograph was taken in May 1993, when James was presented with a plaque from the Santa Barbara International Orchid Show for the Best First Blooming Standard Cymbidium of the Show — *Cym.* James Toya. Above: *Cym.* James Toya 'Geyserland'



Cym. Miracle White 'Gail Toya'



Cym. Dante's Inferno 'Janis Toya'

points (B/CSA). The third was for *Cym.* Miracle Island 'Gail Toya' (Matana x Fanfare), with a score of 76.40 points (B/CSA), *Cym.* Gail Toya 'Toya' (Cleo Sherman x Marquesa Prescott) was the fourth, in 1982, with a score of 79.08 points (B/CSA), and *Cym.* Miracle White 'Gail Toya' (Fanfare x Clark Day) was the fifth, in 1987, with a score of 75.38 points (B/CSA).

The Fred A. Stewart Trophy was presented to James twice over the years. Initially this trophy was annually presented to the amateur grower whose plant received the highest point score for the year. In 1976, James received the trophy for his *Cym.* Brenda Toya 'Bicentennial'. Later on, the requirements for winning this trophy were changed to, the amateur grower who received the highest point score for either a miniature or a novelty cymbidium for the blooming season. James received the Stewart Trophy in 1980 for his novelty *Cym.* Dante's Inferno 'Toya' (Mimi 'Sandalwood' x Sabre Dance 'Red Fern').

Another cymbidium which was hybridised by James, received the Cymbidium Society of America Trophy in 1986. This was *Cym.* Gail Toya 'Springtime', which was exhibited by Seige and Aimee Watanabe.

Throughout the years, James Toya was known for his emphasis on red cymbidiums. He always adhered to his own interesting theory about hybridising reds. Besides looking for parent plants with tall spikes, good shape, and floriferousness, he looked at the edging of the flowers. James noticed many years ago that red cymbidiums had either yellow edging, or white edging. There are many variations of red, ranging from the darkest black/red, to the lightest pink/red. James concentrated on two specific types of reds when trying to hybridise dark reds. He believed that if you took a red with white edging and crossed it with a red with yellow edging, you would get dark reds.

Some of the prettier reds James produced were *Cym.* Marie Toya 'Fire Goddess' (Voodoo x John Blowers), *Cym.* Toya Janis 'Toya' (Voodoo x Sabre Dance), and *Cym.* Harvey's Portagee Girl 'Imperial Dragon' (Marquesa Prescott x Sabre Dance).

Cym. Dante's Inferno was probably the most successful cross hybridised by James. It has received eleven awards from the American Orchid Society. *Cym.* Dante's Inferno 'Toya' and *Cym.* Dante's Inferno 'Marie Toya' both received Silver Awards from the CSA. My personal favourite is *Cym.* Dante's Inferno 'Purple Lady', which has a beautiful purple/red coloured flower.

In 1980, The Orchid Advocate chose a plant hybridised by James, *Cym.* Coral Illusion 'Toya' (Sabre Dance x Doris

Aurea), as the Cymbidium of The Year. The plant received an Award of Merit from the American Orchid Society on February 11th 1980, when it was exhibited by Andy Easton, with twenty two flowers that had an overall width of 12.7 cm — 4.2 cm petals and 5 cm sepals.

For years James was involved with his community in many different ways. In addition to being on the Westside CSA Branch Board of Directors for thirteen years, he most willingly contributed his time and effort as follows:

Board of Directors, for fifteen years, for the Japanese Institute of Sawtelle, and President in 1970;

Vice-President of the West Los Angeles Japanese Community Centre in 1971;

Board of Directors of the American Orchid Society, Los Angeles Branch, from 1982 to 1985;

Helped start the Cymbidium Department of the Bay Cities Gardeners Association in 1982. Organised their first annual cymbidium show in 1985.

James received a very prestigious award in 1989 — the Japanese Agricultural Award — for his contributions in the orchid world.

Shogo Sato and I first met James in 1976. Like everyone else who visited his backyard, we both started an "I want" list. He was responsible for getting us seriously involved in the Cymbidium Society of America that year. Over the years, we frequently convened the original S & S Ohana (family) in his backyard. This original group has since evolved into the Torrance Cymbidium Society.

The Torrance Cymbidium Society awarded James its first Carol Easton Award on June 20th 1990, for his many, many contributions to the Cymbidium Society of America. In December 1991, our branch registered, with Andy Easton's approval, the cross *Cym.* Yowie Flame x Red Beauty, as *Cym.* James Toya. The Torrance Cymbidium Society, in August 1993, also approved the creation of the James Toya Award and the James Toya Scholarship.

The James Toya Award will be presented to an amateur grower who hybridises a red standard cymbidium, grows it, registers it, and receives the highest points score for the year, at an authorised Cymbidium Society of America judging session.

James Toya passed away on December 27th 1993. He was truly a sensei (teacher). He willingly shared his experiences and knowledge of cymbidiums with everyone. His memory will live forever through the over 100 beautiful cymbidiums he created — but more importantly, his memory lives on in our hearts and minds.

Everett Stockstill
1386 Oakhorne Drive, Harbor City
California, U.S.A. 90710



Cym. Coral Illusion 'Toya'



Brenda Fujisawa, daughter of James Toya, standing beside a plant of *Cym.* James Toya 'Geyserland' displayed at the 1996 Santa Barbara Orchid Show.



Cym. Harvey's Portagee Girl 'Imperial Dragon'

An Introduction to Ploidy

by Bill Johnson

Whenever I am discussing orchids with friends or clients these days I am frequently asked to explain what a diploid or a tetraploid is and what it means.

Considering the subject is now very important to all orchid growers we should all know precisely what it all means.

So let me start at the beginning.

The subject we are discussing is known as "ploidy" (pronounced "ploy-dee") which refers to the number of chromosomes an organism possesses.

All living organisms possess chromosomes in their cells whether they be animal or vegetable. The word chromosome is created from the Greek words "chroma" meaning colour and "soma" a body. Chromosomes can be stained with dye thus the word literally means "a body which can be coloured".

The chromosomes contain all the genes which control the structure of an organism.

Each normal organism will have a number of chromosomes common to its specific genus. For instance normal *Cymbidium* species will have 40 chromosomes, but *Paphiopedilums* have 26 (although some species have 32, 38, 42, 48 or even 58) and every genera may have an entirely different number.

We use the term "ploidy" to specify the number of complete chromosome sets in a cell's nucleus.

When an orchid is ready to sexually reproduce itself it will create a flower which consists of both a ovary (seed capsule) and male sperm (pollen).

If the orchid is, say, a normal *Cymbidium* species, then 20 of its chromosomes are provided to the pollen and the other 20 to the embryonic seed in the ovary. When the pollen half fertilises the embryonic seed the result is a fertile seed with a complete set of 40 chromosomes.

The "half" chromosome set is known as the ha-ploid number of chromosomes or "n" number of chromosomes (where "n" is the specific species chromosome haploid number).

When the embryonic seed are fertilised each will have two sets of the "haploid" number of chromosomes (2 times "n" or 2n).

All normal organisms which have two haploid sets of chromosomes are classed as diploids. (Di is a prefix meaning two and, being a prefix, it is pronounced "dye') hence 2n means twice "n".

When an organism grows it does so by cell division. During cell division the chromosomes are duplicated then a wall is placed between the two sets of chromosomes creating two cells from one.

Now nature does some strange things at times and for some reason or other sometimes during the very first cell division no cell wall is created between the two full sets of chromosomes so we have a "tetraploid" single cell. In each consecutive cell division each new cell will continue to have four sets of chromosomes.

The prefix "tetra" means four hence "tetra-ploid". The notation for tetraploids is 4n.

Because every genus of organism has a different diploid chromosome number it would be rather tedious for scientists to specify the actual chromosome number so instead of that an algebraic notation is used.

It is not uncommon for 4n orchids to be found growing naturally – 2n, 3n, and 4n Den. kingianums have been discovered growing naturally together.

Now, by a further quirk of nature, both 2n and 4n plants are fertile and will interbreed. The only problem is the resulting progeny will have a different number of chromosomes. Their progeny's chromosome number will equal the sum of both parents chromosome number divided by the number of the parents – which naturally enough can only be 2.

For example 2 n + 4 n = 6. 6 divided by

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2 = 3. The result is a 3n plant. The prefix used to denote a 3n plant is "tri" (pronounced "try") hence "tri-ploid".

Therefore if a diploid cymbidium (40 chromosomes) is pollinated by a tetraploid (80 chromosomes) the equation is 40 + 80 = 120. 120 divided by 2 = 60. Therefore a 3n will have 60 chromosomes.

3n species have been found growing naturally – for example *Den. kingianum.*

If the notation is an odd number (e.g. 3n, 5n etc.) the plant will usually be infertile but some 3n orchids will produce seed. For example *Cym.* Arcadian Sunrise 'Golden Fleece' is 3n but it does produce some seed. If we cross pollinate that clone with a 4n the result will theoretically be 3.5n.

The notations used for the various ploidy levels are:-

di-ploid = 2n (usually pronounced di-ploid)
tri-ploid = 3n (usually pronounced trip-loid)
tetra-ploid = 4n
penta-ploid = 5n
hexa-ploid = 6n
octa-ploid = 8n

Some years ago it was discovered that diploid plants could be converted to tetraploid and tetraploids to hexaploid status by soaking small protocorms in the chemical *colchicine* at the tissue culture stage.

This proves fatal for a high percentage of the protocorms but some of those that survive may be converted.

Colchicine works by preventing the cell wall from forming between dividing cells.

The first tetraploid orchids occurred naturally from groups of seedlings created by hybridisers. One such natural tetraploid was *Cym.* Pauwelsii 'Compte de Hemptinne' and another *Cym.* Alexanderi 'Westonbirt' . Others, "modern" accidental tetraploids include, *Cym.* Vieux Rose 'Del Park' and *Cym.* Wallara 'Gold Nugget'.

When the first "accidental" tetraploid cymbidiums were used in breeding their ploidy status was unknown and they were bred with diploids. This produced sterile triploids but also more accidental tetraploids. Those coupled with colchicine converted tetraploids, forms the basis of all modern-day tetraploid cymbidiums.

Modern cymbidiums are now mostly tetraploids. Prior to 1980, cymbidium hybridising mostly centred around triploids and we saw the creation of thousands of excellent but infertile orchids.

What are the benefits of non-diploid plants?

The theory behind 3n breeding was that this produced a plant which was more vigorous than a tetraploid. This is partially correct, because during that era the tetraploid parents which were available were sluggish to grow and because of their genetic origin produced less flowers. Colchicine converted plants were also slow to grow, but this was due to their conversion, but when they were used for breeding, vigour and flower production returned.

Today's tetraploid is more productive and will grow just as vigorously as any triploid.

The modern tetraploid will produce 20 or more flowers per raceme and two or more racemes per bulb is now commonplace.

Tetraploid plants produce flowers which are larger than their diploid counterpart, the flower substance is thicker and the flower shape is improved.

If the plant is 6n (hexaploid) then that is a different matter. The plant will be much slower to grow, the flower substance will be quite heavy and less flowers will be produced. it will also take a longer time to reach flowering size.

One phalaenopsis, a clone of *Phal.* Cast Iron Monarch (if I remember correctly), is reputedly 6n – and 6n species have been found growing naturally.

One aspect of hexaploid plants is that they can be bred with diploids, giving instant tetraploids. In fact we will also get more accidental hexaploids. The fact that a plant is 4n or 6n is no guarantee that it will breed.

It is quite likely that many modern phalaenopsis and pahiopedilums are hexaploid.

How do we tell them apart? The chromosomes can be counted (with some difficulty and expense), or we can measure the stomatal opening. Both methods require a very good microscope and the latter method is not entirely precise, but with a lot of practice a 95% success rate can be achieved.

There are other indicators which will tell us if a plant is not 2n.

Normally the root diameter will be greater, the flower shape will be larger and substance heavier and the foliage will have more substance. If the plant is from a 3n cross and it breeds freely, then it will most certainly be at least 4n.

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Dr. Jim Burstal

– Profile of a Show Grower

by Peter Rochfort

One aspect of growing orchids for the showbench is the rich array of characters and personalities which are attracted to this highly competitive endeavour. Many committed show growers, through consistent showbench success over a period of time, tend to acquire a high profile and often legendary stature. In New South Wales John Mata, Bill Hughes and Tom and Edith Price are well known names. Many show enthusiasts, especially on Sydney's North Shore, would be familiar with Jim Burstal, who has been growing orchids since the early 1940s.

Jim was our family doctor for many years. On the occasions when I was ill, Jim's house visits would always include conversations on various aspects of orchid growing. He was a successful grower and I had a fanatical interest in orchid breeding from a cut flower perspective. I decided that some of Jim's experiences in orchid growing should be committed to paper. I interviewed Jim in 1995, while he was on one of his many visits to Sydney.

Peter: I believe your father was already well known in orchid growing circles when you were "bitten by the bug" at an early age.

Jim: Yes, my father, Dr. (Bill) Burstal, had been growing orchids before I was born. His interest was kindled by a man named Mr. Hatcher, after which he decided to build a small glasshouse. He then met Jack Bisset, with whom he had a long association from the time Jack was



Dr. Jim Burstal

about eighteen and working in his grandfather's nursery. At the time, dad was living in Annandale and, after moving to Killara in 1936, he began growing more cymbidiums.

Peter: Wasn't your father instrumental in the formation of the Orchid Society of New South Wales? Could you shed a little light on events at the time?

Jim: Yes. As a matter of fact, there was a comment recorded in the recent Commemoration Issue of the Australian Orchid Review to the effect that, "on July 3rd 1934...Dr. (Bill) Burstal proposed that the time was opportune for consideration to be given to the formation of an Orchid Society, and it was his insistence upon something more definite than an occasional, friendly meeting that actuated those present to heartily support the Doctor in his suggestion that a society should be formed in New South Wales." On August 7th 1934, the Orchid Society of New South Wales was officially formed and dad became an inaugural member of Committee until standing down in the following year, due to the demands of his practice.

Peter: The fact that your dad was already entrenched in the orchid fraternity would certainly have provided you with an incentive to develop an interest in orchids. At what age did this occur?

Jim: I was born in the Sydney suburb of Annandale on the 17th of January, 1933. My earliest recollections include visiting Jack Bisset's nursery on Sunday mornings, where many orchid identities gathered. I was given my first two cymbidiums about 1941. One was *Cym. i'ansonii*, a species, and the other was an early hybrid called *Cym.* Auk (Landrail x Pauwelsii).

Peter: Orchid growing must have been quite different then compared to our present day conditions with our chemical 'super fertilisers', polythene pots and dripper systems.

Jim: Very different indeed! Not only were we in the middle of the Second World War, we were also experiencing a drought. The cymbidiums lost all their new leads,



Cym. Girrahween 'Enid' FCC



Cym. Balkis 'Luath' AM



Cym. Dorchester 'Jeanette'



Cym. Cariga 'Burmah' – often used by Jim in the Best Three Coloured class

but they continued to flower. Because of the drought, they were watered from a tank using a bucket. Water was caught as it went through the pot and then used to water the next orchid.

Peter: Good grief! I can hear present day growers quaking in their boots and babbling about rot pathogens, virus and the like. Perhaps many of the early hybrids were more hardy than our current pampered, complex cymbidiums. I remember when I started growing orchids, the standard orchid house was wire netting threaded with Teatree branches. What are your early memories of housing and fertilisers?

Jim: Our main bush house, which was outside a chicken yard, was made of wire netting and Teatree. The orchids were not fed, but rotted grass clippings were used in the mix along with sand and tan bark. We grew some huge specimen plants in this mix, including *Cym.* Swallow 'Daffodil', which on one occasion, flowered with thirty-three spikes.

Peter: Were plants freely available in Australia at this time, or did you secure plants from overseas as did some of the other growers?

Jim: We bought a number of plants in from overseas. In about 1946, when a man came out from the English nursery Mansell & Hatcher, we contracted to buy some plants from them. The plants arrived by ship and went into quarantine. Unfortunately, none of them ended up being much good. we had better luck importing from others, including Black and Flory. It was from Black and Flory we obtained *Cym.* Altair 'Luath', which later received an HCC for other growers.

Peter: *Cym.* Girrahween 'Enid' was a famous show flower, which won a number of championships and an award for your dad. How did you acquire the plant?

Jim: There was an amusing story attached to *Cym.* Girrahween 'Enid'. Dad and Keith Kirkland were friends and Keith swapped dad a backbulb of a colourful flower, which dad potted and then neglected. Keith was also a show grower and about eighteen months later, he received an FCC for a shapely, reddish coloured flower. Dad asked, jokingly, whether he could have a backbulb of the plant. Keith pointed out that he had already given him a backbulb, which dad quickly located and resurrected. The plant was the famous *Cym.* Girrawheen 'Enid'. In those days, awards were generally given to the grower rather than the plant and dad was subsequently awarded an FCC when he showed his plant. *Cym.* Girrawheen 'Enid' won Grand Champion of the Orchid Society of New South Wales Spring Show on a number of occasions. We also won an HCC for *Cym.* Flamingo 'Allambie' around this time.



Cym. [(Sheba x Stanley Fouraker) x Sylvania] 'Drumbeat'



Cym. Mem. Tom Henry 'Tammera'

I have always liked coloured flowers and won an AD and Best Cymbidium in the New South Wales Spring Show in the early 1950s with *Cym.* Carisbrook 'Thelma'. This was the first time we flowered *Cym.* Carisbrook 'Thelma' and after gaining its award, it never flowered again. We also won an AD around the same time with *Cym.* Sparta 'Etna', another highly coloured red.

Peter: *Cym.* Girrawheen 'Enid' was not the only orchid with an interesting story. You can clear up a long standing controversy over another famous cymbidium, while we are delving into the past.

Jim: Yes. The particular orchid caused a furore when shown. The weekend before the 1950 New South Wales Spring Show I was in the bush house when I noticed a white flower with a pink blushed labellum. The flower stood out amongst the others and, although it only had six flowers, it was considered by those who saw it to be worthy of entering in the show. It subsequently won Grand Champion of the Show and was awarded an AM. The plant was *Cym.* Balkis 'Luath'. The furore was caused by the fact that a plant with so few flowers could gain a championship and a high award. A regulation was passed that from then on a plant was required to have a minimum of seven flowers to be eligible for an award.

Peter: There are a number of older growers who claim that *Cym.* Blakis 'Luath' and *Cym.* Balkis 'Patricia' are the same, while others swear that they are different. Can you shed some light on the subject?

Jim: I can clear that one up easily. They are indeed one and the same!

Peter: How is it that the debate first started?

Jim: A grower named Charlie Hildebrandt flowered *Cym.* Balkis 'Patricia' as a seedling and subsequently swapped a piece to dad for a division of Cym. Flamingo 'Allambie'. *Cym.* Balkis 'Patricia' had been flowered in the shade and was a pure white with one spot on the lip when it gained an HCC for Charlie in the late 1940s. It was flowered pink with much more colour in the lip when I won an AM in 1950 with it..

The then Registrar, Doug Agnew, maintained that it could not be called *Cym.* Balkis 'Patricia' because it did not fit the description. Consequently, a new varietal name was needed. I called it 'Luath' after the name of the family home. A number of other show flowers, including a *Cym.* Anita, a *Cym.* Profita and a *Cym.* Bobbin Head, also bear this varietal name. I have never seen a subsequent flowering of *Cym.* Balkis 'Luath', even in heavy shade, which has no lip colour.

Peter: What were some of the other cymbidiums which did well for you at the time?

Jim: There were quite a few. Some names that come to mind are *Cym.* Profita 'Luath', *Cym.* Anita 'Luath' and some of the *Cym.* Sensations. These gained awards at the time. About 1954, my medical studies became a heavy burden and there was nothing shown until the 1960s, when I began to show plants again. During this



Cym. Ruby Anniversary 'Pink Surprise'

period, I still maintained an interest acquiring new plants and flowering new seedlings. I won Reserve Champion at the New South Wales Spring Show in the early 1960s with *Cym.* Dochester 'Jeanette'.

Peter: Was your father still involved with the collection during this period?

Jim: No. Dad retired to the South Coast in 1962 and the collection moved to Pymble, where it remained until 1994.

Peter: Did you continue to show flowers by yourself?

Jim: In the 1960s I teamed up with Wally Eyre, a well known Sydney show grower. The aim was to develop a bank of top quality show orchids and, in the process, I acquired *Cym.* Highland Mist 'Lalchere' and *Cym.* Mallana 'Careel'. Both plants have subsequently won several championships. In 1988 I became tired of benching the same old showbench orchids and set out to find some new varieties. I acquired a plant of *Cym.* Mem. Tom Henry 'Tammera' from Foxfire Orchids and gained an AM/OSNSW in 1991. Each time I have shown 'Tammera' it has won Grand Champion of the Show.

Peter: Has the move to Young affected the number of orchids you are growing? You have considerably more room there.

Jim: I'm still looking for new orchids to grow. The extra space has enabled me to grow large numbers of seedlings, from which I hope to gain some interesting new show flowers.

Peter: What are the main varieties you are now growing for the shows?

Jim: For white I am growing *Cym.* Lake Macquarie 'Winsome', *Cym.* Highland Mist 'Lalchere', *Cym.* [(Kalang x Baltic) x Melita Fair] 'Krista' and some *Cym.* Poetic Wonder seedlings. The yellows include *Cym.* Mem. Tom Henry 'Tammera', *Cym.* Jubilation 'Geronimo' and *Cym.* Trinity Hall 'Warnervale'. As for green, we have an excellent *Cym.* Valley Bay and some *Cym.* Valley Zeniths. The pinks include *Cym.* Narela 'Jennifer Gail', *Cym.* [Sylvania x (Stanley Fouraker x Sheba)] 'Drumbeat' and *Cym.* Ruby Anniversary 'Pink Surprise'. In the red range we have *Cym.* Wallamurra 'Jupiter', *Cym.* Sensation 'Purple Perfection' and *Cym.* Pontac 'Trinity'. I also keep some of the Cym. Anitas with which I've won many prizes in decorative classes over the years.

Jim has been President of Sydney's North Shore Orchid Society since 1993, despite moving to the New South Wales country town of Young in 1994. The orchids have experienced some interesting climatic changes in the country, including temperatures as low as minus 11 degrees Celsius, snowfalls and dust storms. Despite the ravages of nature, Jim maintains that his orchids are flowering better than ever before. With a large number of seedlings coming on, we should be seeing some interesting new show flowers being benched by Jim at Sydney shows in the near future.

Peter Rochfort
P.O. Box 639
Gosford, N.S.W. 2250

Recycling Pots

by Clive Halls

I guess today we all have to consider our costs, whether hobbyist or professional. Large plastic pots are fairly expensive, not many growers would treat them as throw away items, at least not for a few years.

So if we re-use a pot, how can we be sure that no disease or virus will be handed on with the pot?

Firstly, I would say if you know, or strongly suspect a plant to be virused then don't re-use the pot, throw the whole lot in the rubbish heap. This doesn't mean that pots from virus free plants don't need to be treated carefully, they do, because even plants that look clean (virus free) can be hiding the virus which can be passed on through dirty pots.

Pots to be recycled should be still in good condition, no cracks and with a reasonably shiny surface. Even black pots (the most durable pot colour) have a use by date, different brands and of different quality will have varying useable life.

First rinse out the pot with cold water to remove the worst remains of potting mix, dead roots and wild life like slugs, snails, slaters etc. Next wash thoroughly with hot soapy water, using a fine bristle brush to remove all traces of dirt.

Make up a sterilising solution of Amway Pursue used at recommended rate,, and dip the pot in this. This is one of the few sterilising agents that really kill virus. The pot must dry completely before being re-used. Once dry you can wash the pots again, but it is not necessary.

Some growers sterilise in White King or similar products. This is probably good enough, especially if you have done a good job of the hot soapy wash. However, virus is very hard to kill and White King can not be guaranteed to destroy virus.

Heat will sterilise, so boiling pots is an option but not very practical. Standing the washed pots in the summer sun for a few days will also give you added protection.

So for me it is wash, dip in Amway Pursue, and dry in the sun – and you should not have any problem.

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Clive Halls



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Artificial Pollination of *Cymbidium canaliculatum (Orchidaceae)*

by Deng Shiya and Neil D. Hallam



Abstract:

The growth variation of ovary and column in *Cymbidium canaliculatum* was examined following artificial self-pollination. The first change following pollination was expansion of the columns two days after pollination and the surface colour of the ovary changed from brown to purple after 7 days. Increase in length and width of the ovary continued until eighteen weeks after pollination and then the ovary began shrivelling and dying in the case of self crossed flowers. The average length and width of capsules were 39.2mm and 15.3mm respectively and the ratio of length/width was 2.56 at nineteen weeks after pollination in self pollinated flowers. The plants appeared to be self-incompatible as no seeds were set.



Introduction

Cymbidium canaliculatum, Cymbidium madidum and *Cymbidium suave* are the only three native epiphytic species of Australian *Cymbidium* orchids. There are however 46 recognised species (Du Puy and Cribb, 1988) in the genus *Cymbidium* which is mainly distributed in Asia. *Cymbidium canaliculatum* can be found throughout tropical Australia. In the natural environment, pollination of this species is completed by the bee *Trigona sp.* which has been confirmed by Adams and Lawson (1993). In the glasshouse without bee activity, there is no pollination even with ants active during the flowering period, although some species of orchids *(Microtis parviflora)* are pollinated by the ant *Iridomyrmex gracilis* (Peakall and Andrew, 1991). In the family *Orchidaceae,* the time between pollination and fertilisation varies with species from 4 days in *Gastrodia elata* to 6-10 months in Vanda suavis. In *Cymbidium canaliculatum,* fertilisation occurs approximately 75-85 days after pollination (Rutherfurd, 1991). Although some attention has been paid to taxonomic observation of the genus *Cymbidium,* only a few light microscopy

TABLE 1 – ovary growth of cymbidium canaliculatum (average single, mm)

plant A	weeks											
	ten	eleven	twelve	thirteen	fourteen	fifteen	sixteen	seventeen	eighteen	nineteen	twenty	twenty one
length	32.5	35.1	37.1	38.7	39.7	40.1	40.4	40.7	40.6	shrivelling		
width	8.92	9.92	10.9	11.7	12.2	13	13.8	13.8	13.8	and		
l/w	3.64	3.54	3.4	3.31	3.25	3.08	2.93	2.95	2.94	dying		
plant B												
length	32.2	34.2	36	37	37.9	38.3	38.3	38.5	38.9	39.2	239.2	shrivelling
width	7.92	8.92	10	11.2	12.2	13.2	14	14.2	14.7	15.3	15.3	and
l/w	4.07	3.83	3.6	3.3	3.11	2.9	2.74	2.71	2.65	2.56	2.66	dying

studies have been carried out on gametophyte and embryo development in the section *Austrocymbidium* (which includes *Cymbidium canaliculatum* and *C. madidum, C. suave, C. hartinahianum, C. chloranthum* and *C. elongatum*). The present research has examined the growth variation of ovary and column in *Cymbidium canaliculatum* after artificial self pollination in the glasshouse.

Materials and Methods

Two plants (A and B), one of each clone originally from Hunter River in NSW (Rutherfurd, 1991), were selected as material for the experiment. The plants were grown in the glasshouse in plastic pots with a mixture of decaying bark chips and charcoal. One inflorescence was produced from each plant in the flowering period. 20 flowers were self pollinated artificially for each plant. Both pollinia were removed from each flower by using a wooden toothpick and placed immediately on the stigma surface of the same flower. 5 flowers remained unpollinated on each inflorescence as a control. The pollinated flowers were observed for post-pollination changes of column and ovary. The measurements were taken once a week for length and width of the ovary. Photograph was taken in various stages including pollination, post-pollination of the ovary and capsule development.

Results

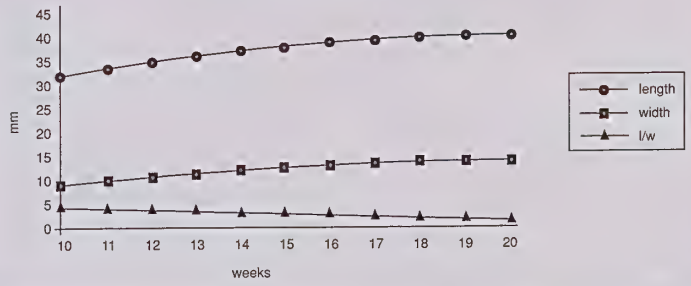
1, unpollinated flowers:

In the control, five unpollinated flowers on each inflorescence remained flowering for approximately 6 weeks and then the perianth wilted. During this period, there was no natural pollination even with ants working on the flowers harvesting nectar. These flowers with undeveloped ovaries dried and dropped off the spikes approximately six weeks after opening.

2, pollinated flowers:

A rapid response to pollination occurred in all pollinated flowers. Significant expansion of the columns was the first change only two days after pollination, followed by wilting of the perianth parts and swelling of the column. The apex of the column became further swollen and partially sheltered the stigma cavity four days after pollination. By seven days after pollination, the perianths withered and the surface colour of the ovaries changed from brown to purple, followed by the enlargement and elongation of the ovary. The column continued expanding for two weeks after pollination and then gradually dried up.

Fig 1: growth of ovary for plant A



3, growth of the ovary:

Although 20 flowers were pollinated on each plant, some pollinated flowers died after pollination at different times. those pollinated flowers on the tip of inflorescence (younger flowers) appeared to have a lower capacity to survive compared to the ones at the lower position on the spike. As a result, 11 ovaries developed to capsules remaining on plant A and 10 on plant B. By ten weeks after pollination, 6 capsules for each plant remained for size measurement and other 9 capsules were taken for *in vitro* study.

As indicated in table 1 for plant A and plant B, ovaries grew in length and width before shrivelling and died at eighteen and twenty weeks after pollination respectively due to unsuccessful fertilisation. Before shrivelling, the ovaries appeared to be healthy, grew normally and developed to capsules. The average length and width

Fig 2: growth of ovary for plant B

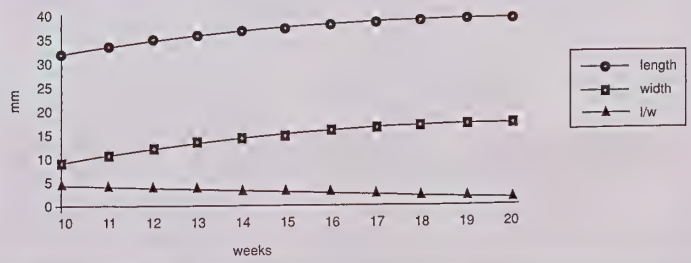


TABLE 2 – pollination rate, capsule growth rate and fertilisation rate

	flowers pollinated	pollination success	pollination rate	capsules developed	growth rate	fertilisation success	fertilisation rate
plant A	20	20	100%	11	55%	0	0%
plant B	20	20	100%	10	50%	0	0%

of capsule were 40.7mm and 13.8mm respectively for plant A at seventeen weeks after pollination, 39.2mm and 15.3mm respectively for plant B at nineteen weeks after pollination. Length/width (l/w) ratio represented the variation of capsule shape and indicated that growth in length was quicker than growth in width. The smallest ratio of l/w was 2.94 at eighteen weeks after pollination for plant A, and 2.56 at nineteen weeks after pollination for plant B. The capsules reached their largest size (40.7/13.8 for plant A, 39.2/15.3 for plant B) and then shrivelled until they died. Figure 1 and figure 2 show the growth of capsules for plant A and plant B respectively.

4, self-incompatible:

Fertilisation was unsuccessful (table 2) as the capsules died (abortion) eighteen and twenty weeks after pollination for plant A and plant B respectively following self-pollination. The pollination rate was 100% for both plants, but no fertilisation occurred. The capsule growth rate was 55% for plant A and 50% for plant B. That is to say, only 11 out of 20 pollinated capsules developed in the case of plant A and 10 out of 20 for plant B. As a result, both clones were a self-incompatible line.

Discussion

Only by the test of self-pollination to find out that whether or not fertilisation is achieved, can the status of self-incompatible be confirmed. In the present study, both plant A and plant B showed self-incompatibility which was consistent with previous research conduct by Rutherfurd in 1991. Her work showed as following: pollen grain germination and pollen tube growth through the stylar canal and into the ovary for self pollinated flowers was identical to cross pollinated flowers. The ovules of self pollinated flowers continued to develop up to 65 days after pollination and eight-nucleate embryo sacs formed. However, the pollen tubes failed to fertilise these mature embryo sacs and by 96 days after pollination these unfertilised ovules had shrivelled up along with much of the placentation of the ovary. Yellowing and abscission of the fruit from the spike followed. On the other hand, the ovules of cross pollinated flowers developed to mature capsule with normal seeds by 8 months after pollination. Both our study and Rutherfurd's indicate that our clones of *Cymbidium canaliculatum* are self-incompatible.

The abortion of flowers and immature fruits is a common phenomenon. The finding of the position-related fruit set along inflorescence in our study is consistent with previous research which showed that the increase of the fruit set was significant from the tip to the base of the inflorescence (Berry, 1991; Bawa, 1984 and Stephenson, 1981). There are three hypothesises in relation to flower and fruit abortion. The 'resource limitation' hypothesises traces the abortions to shortage of resources. The 'pollinator limitation' hypothesis invokes inadequate pollination as the factor to abortions. The 'sexual selection' hypothesis attributes abortions to conflicts inherent in the optimisation of male and female reproductive success. In our case, the hypothesis of resource limitation is more practicable than other two hypothesises. In the competition for nutrients from leaves and roots, the flowers at the top of the inflorescence are probably disadvantaged compared to the ones at the lower position.

Previous research also presented similar results. The fruit set by early flowers on the inflorescence have a higher probability of retention than those set by subsequent flowers (Bawa & Webb, 1984). Flowers at the top of the inflorescence were apparently unable to set fruit (Berry, 1991). All these research indicate that fruit set depend on the position of the inflorescence.

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President, Ern Kettle, Phone: (03) 5555646

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
New South Wales				
5-8 October	Shopping Centre Hours	Spring (Mattara Festival)	Newcastle	Honeysuckle Development Corp. Hall 251 Wharf Road, Newcastle
5 October 6 October	9.00am-5.00pm 9.00am-4.00pm	Spring (Aust. Inland Champ. Show)	Albury-Wodonga Orchid Club	Albury Convention Centre Swift Street Albury
6 October	9.00am-3.00pm	Spring	Southern Riviena	Showground Milton
11-13 October	9.00am-6.00pm	Spring (2UE Garden & Home Show '96)	New South Wales	Royal Hall of Industries R.A.S. Driver Avenue, Moore Park
12-13 October	9.00am-5.00pm	Spring (Sarcanthinae Show)	Australasian Native (Newcastle Group)	University Hall Cnr. King & Auckland Streets Newcastle
Queensland				
2-5 October	Shopping Centre Hours to 12 noon Saturday	Spring	Bundaberg	Sugerland Shoppingtown Takalvan Street Bundaberg
3 October 4 October 5 October	8.30am-9.00pm 8.30am-5.30pm 8.30am-3.30pm	Spring	Sunshine Coast Caloundra	Sunland Shopping Centre Bowman Road Caloundra
11-12 October 13 October	9.00am-5.00pm 9.00am-4.00pm	Spring	Aspley	Community Hall Edinburgh Castle Road Wavell Heights
12-13 October	8.30am-4.30pm	Spring	Bribie Island	Bribie Island Indoor Bowls Hall First Avenue, Bribie Island
13 October	8.00am-4.00pm	Spring (Sarcochilus Festival)	Native of Toowoomba	Harristown State High School Assembly Hall South Street, Toowoomba
17-19 October	Shopping Centre Hours	Spring	Pine Rivers	Aspley Pickn'pay Hypermarket Aspley
17-19 October	Shopping Centre Hours	Spring (Tropicarnival '96)	Southport & Districts	Burleigh West Shopping Centre West Burleigh Road West Burleigh
19 October 20 October	8.30am-5.00pm 8.30am-4.00pm	Spring	Ipswich	Bundamba State School Brisbane Road Bundamba, Ipswich
Victoria				
4 October 5 October 6 October	12.30pm-6.00pm 9.00am-6.00pm 10.00am-4.00pm	Spring (Bendigo Orchid Show)	Bendigo Orchid Club	Kangaroo Flat Leisure Centre Browning Street Kangaroo Flat
5-6 October	TBA	Spring	Albury/Wodonga	Albury Convention Centre Swift Street, Albury
5-6 October	9.00am-5.00pm	Spring	Stawell	S.E.S. Hall, Sloane Stret Stawell
5 October 6 October	10.00am-5.00pm 10.00am-4.30pm	Spring (Geelong Orchid Festival	Geelong Orchid & Indoor Plant Club	Centenary Hall Cox Road Norlane
5 October 6 October	10.00am-5.00pm 10.00am-4.00pm	Spring	Gippsland Orchid Club	Kildare College Hall Kosiusko Street Traralgon
5-6 October	9.00am-5.00pm	Spring	Goulburn Valley Orchid Club	Emerald Banks Goulburn Valley Highway Shepparton South
5 October 6 October	11.00am-5.00pm 10.00am-4.30pm	Spring	Warnambool	Warnambool College Hall Kosciusko Street Traralgon
5 October 6 October	9.00am-5.00pm	Spring (Native Orchid)	Australian Native (Victorian Group)	Holmesglen College of TAFE Waverley Campus 585 Waverley Road Glen Waverley
5 October 6 October	10.00am-6.00pm 10.00am-5.00pm	Spring	Warrigal	Red Cross Centre Gate 7 Repatriation Centre Bell Street, Heidelberg

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
7-12 October	Shopping Centre Hours	Spring	Ringwood	Eastland Shopping Centre Ringwood
7-12 October	Shopping Centre Hours	Spring (Karingal Show)	Mornington Peninsula	Karingal Hub Shopping Centre Cranbourne-Frankston Road Frankston
11 October 12 October 13 October	1.00pm-6.00pm 10.00am-6.00pm 10.00am-4.00pm	Spring	Ballarat	St. Patricks Hall Dawson Street Ballarat
11 October 12 October 13 October	12 noon-5.00pm 9.00am-5.00pm 9.00am-4.00pm	Spring	Horsham & District	Horsham Botanic Gardens Firebrack Street Horsham
12 October 13 October	11.30am-4.30-pm 10.30am-4.30pm	Spring	Colac	Colac High School Princes Highway, Colac
13-15 October	TBA	Spring (Town & Country Show)	Victorian Orchid Club & Affiliated Societies	The Centre Point Royal Melbourne Showground Epsom Road, Ascot Vale
17-19 October	Shopping Centre Hours	Spring	Hamilton	Thompsons Plaza Hamilton
18 October 19-20 October	12 noon-5.00pm 10.00am-5.00pm	Spring	Midlands	"Skydancers" Blackjack Road, Harcourt
19 October 20 October	10.00am-4.00pm 11.00am-4.00pm	Spring	Cobden & District Orchid Club	R.S.L. Hall Victoria Street, Cobden
19 October 20 October	10.00am-5.00pm 10.00am-am-4.00pm	Spring	Yarra Valley	Seville Hall Warburton Highway, Seville
25-26 October 27 October	10.00am-5.00pm 10.00am-4.00pm	Spring	Ararat	Town Hall Barkley Street, Ararat
2-3 November	10.00am-5.00pm	Spring (Mainly Sarcochilus)	Australian Native (Geelong Group	The Masonic Hall Gheringhap Street Geelong
9-10 November	9.00am-5.00pm	Spring (Sarcochilus Festival)	Maribyrnong	Maribyrnong Community Centre Randall Street Maribyrnong
9-10 November	Business Hours	Spring (Sarco/Masd Show)	O.S.C.O.V.	Ding House & Garden Centre Dandenong Road Dingley
Tasmania				
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The Official Publication of the Orchid Society of New South Wales and the Victorian Orchid Club.

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Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
14 McGill Street, Lewisham, NSW 2049
Australia.
Phone: (02) 9560 6166. Fax: (02) 9560 6677

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OUR COVER



Cym. Akebono 'Dural'. A lovely *Cymbidium* in the display by David Allen, editor of the Victorian Cymbidium Society, and his wife Carol at the inaugural National Cymbidium Show held at Ararat. – *Photo: Michael Matthews.* See *"Cymbidiums Australia"* on page 47.

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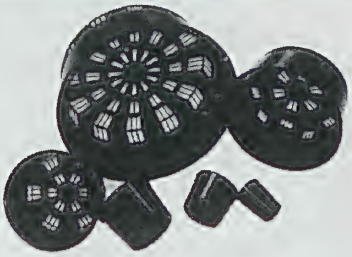
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Volume 61 — No.6 December, 1996

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Grand Champion Orchid Plant *Cattleya nobilor* 'Matilda' – *BioOrchids*

15th World Orchid Conference and Show

Text: J. Apperley Photograph: S. Heyden

The venue for the 15th World Orchid Conference Show was the Museum of Modern Art with lectures held at the Hotel Gloria in Rio de Janeiro from the 14th to 23rd of September.

Tuesday morning presented itself as dismal and wet, slowly improving during the day with the official opening ceremony staged later that evening in fine conditions. Quite a large number of people attended this event. Following cocktails and a performance by a rather noisy band of drums and a dancer on stilts, the show was opened.

On entering the Museum hall we were greeted by massed displays lining the perimeter. All displays featured an artistic theme with cattleyas and phalaenopsis prominent among a generally wide selection of orchids. An upstairs area twice the size of the lower floor was a riot of colour with similar large displays. One which caught the eye was presented by the Singapore Botanical Gardens. A rainforest of colourful cut flowers. Oncidiums, hardcane dendrobiums and a variety of vandaceous orchids were the main features of this brilliant effort. Another prominent display by the Taiwan Sugar Corporation featured phalaenopsis in every imaginable colour combination. These were set in sandstone styled boxes in a bed of crushed white pebbles.

One other display worthy of mention where once again phalaenopses were used to great visual effect. The orchids were placed in bamboo poles varying in length up to two metres with the racemes erupting from the top to cascade towards the floor. Hardcane and softcane dendrobiums were then arranged in crushed white pebbles at floor level creating a spectacular sight.

Another huge and impressive display was created by Floralia. This display featured many different structures in the form of buildings. A two storey house complete with balcony over which hung several pots of a pendulous pink dendrobium. Also a brick wall complete with a lion head fountain surrounded by a variety of orchids. Other features were a small house with curtains and lights and a church with steeple and bell. Between these two buildings was a pathway with wrought iron gates. This display was set into a corner using the right angle to perfection. Picture this scene with groupings of orchids set in walkways and try to imagine the planning necessary to stage such an exhibit measuring approximately 50sq. mts.

All displays were of a high standard and worthy of mention but those listed were according to my judgement, among the best.

Grand Champion Orchid Plant, *C. nobilor* 'Matalia' was also awarded a Gold Medal, Best Laeliinae, Best Cattleya species and also Best Brazilian species. The plant carried three white flowers with a very pale lilac overlay of excellent shape and texture. The labellum was most attractive with the tip a deeper lilac with pale brown and lilac veining. This plant was a well deserved winner and was presented by Bio Orchids. Reserve Champion Orchid Plant and Best Vandaceous was *Vascostylis* Cynthia Alonso 'Saphire'. This plant owned by R. F. Orchids also won a Gold Medal. AMong the Australian medal winners were Heyden and Uhlmann winning one gold, one silver, one bronze and many other prizes. Robertson Orchids known for good flowers and presentation also received a silver medal and several wins in the phalaenopsis classes. A first prize was won also by a cymbidium in the O.S.N.S.W. display but at this stage the owner is unknown.

The photographic section was most interesting and the evidence of thought, effort and time was visible in the winning exhibits in various sections. An excellent display by J and C Hermans featuring one hundred large photos of many difference draculas won class 488, Photographic-Botanical, also class 449, Photographic-Artistic.

Worthy of mention also were some ten table-top displays. These were set along one wall, featuring a vast array of different orchid genera. I estimated a full day would be necessary to properly view these displays and the individual plants contained within. Even though I would probably never get to own a piece of any of these plants, I would have been satisfied to find out the names of some. However with a schedule carrying four hundred and fifty classes and many thousands of individual plants I was satisfied to participate and view a marvellous spectacle including the show and the South American scenery.

A list of trophy winners is included below.

BEST BRAZILIAN SPECIES – *Cattleya nobilor* – Exhbt. No 11. Bio Orchids.

BEST FOREIGN SPECIES – *Doritis pulcherrima* – Exhbt. No. 15. Aichi Orchid Growers.

BEST ORCHID HYBRID – *Odontoglossum* Augres 'Mont Millais' – Exhbt. No 33. Eric Young Foundation.

BEST PAPHIOPEDILUM – *Paphiopedilum hirsutissimum* var. *esquirolei* 'George Botley' – Exhbt. No 74. Heyden and Uhlmann.

BEST LAELIINAE – *Cattleya nobilor* – Exhbt. No 11. Bio Orchids.

BEST ONCIDIINAE – *Odontoglossum* Argres 'Mont Millait' – Exhbt. No 33. Eric Young Foundation.

BEST VANDACEOUS – *Vascostylis* Cynthia Alonso 'Saphire' AM/AOS – Exhbt. No 58. R.F. Orchids.

BEST PHALAENOPSIS – *Phalaenopsis* Talitha Klehm – Exhbt. No 77. Paphanatics.

BEST CYMBIDIUM – *Cymbidium* Hazel Tyers x Candy Floss – Exhbt. No 73. Cal Orchids.

BEST DENDROBIUM – *Dendrobium* Diane Shimazu – Exhbt. No 79. H & R Orchids.

BEST CATTLEYA SPECIES – *Cattleya nobilor* – Exhbt. No 11. Bio Orchids.

BEST CATTLEYA HYBRID – *Cattleya* Ray Holmes – Exhbt. No 73. Cal orchids.

BEST SPECIMEN MINIATURE ORCHID – *Barbosella dusseini* AJAO Joinville.

BEST SPECIMEN ORCHID – *Laelia jongheana* – Exhbt. No 5. Floralia

MOST INNOVATIVE EXHIBIT DESIGN – Atibaia Flowers – Noboyuki Hiranaka.

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GRAND CHAMPION EXHIBIT – Floralia Orquidários.

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GRAND CHAMPION ORCHID PLANT – *Cattleya nobilor* – Exhbt. No 11. Bio Orchids.

J. Apperley

Cattleya Species –



C. intermedia var. *amethystina* 'Aranbeem'. One of the many varieties of this species.

Flamboyant Flowers for all Seasons

Text: Robert Friend Photography: Robert Friend and Graham Gamble

Part 2

Now for a more detailed look at some of the species, most of which are reasonably easy to obtain these days from seed-raised populations. Please note that the recommendations for cooler areas are mine alone. You or your acquaintances may already grow well in cooler areas some of those I do not recommend. Take local advice from experience growers in your area – my recommendations can only be of a general nature. Above all, if you are already growing and flowering well a *Cattleya* species (or any other orchid), do not change anything no matter what anyone says. You have found the right place in your conditions for that plant.

Cattleya aclandiae: a small-growing species from coastal northern Brazil with 8cm light green-brown, purple spotted flowers. Lip with a broad rose-coloured mid lobe and white side lobes. Flowers in summer, usually single flowers from each new growth as soon as it matures. This species has very thick roots. We find the smaller-growing *Cattleya* species which have thick roots do well for us growing on mounts with their roots exposed. The best *C. aclandiae* we have grown were mounted on 40cm sections of callistemon branch. Interestingly, Dr. Fowlie describes it as growing in nature on non-deciduous trees with "curious rumpled bark". This species comes from quite a hot climate so must be kept dry in winter if attempted in cooler areas.

Cattleya amethystoglossa: another Brazilian species from the same area as *C. aclandiae* but even closer to the coast, thus enjoying a more humid climate. This is a very tall bifoliate with thin pseudobulbs up to a metre in height. It grows through spring and summer then rests until August when the buds push through the usually dry sheath. Up to 12 flowers, sometimes more, each about 7cm, light pink usually heavily spotted with dark amethyst, lip dark amethyst.



C. amethystoglossa – has imposing clusters of colourful flowers on tall stems.

Cattleya aurantiaca: a spring-flowering Central American bifoliate species which is easy to grow. It carries large clusters of flowers averaging about 4cm in diameter. The colour varies from lemon to yellow to rich red and is dominant in hybridizing. Some clones are self-pollinating so be sure to ask the vender if buying what seems to be cheap adult plant.

Cattleya aurea: this Columbian species has been better known as *C.dowiana* var. *aurea* but is today considered to be a separate species. A unifoliate, it bears large showy yellow flowers with magnificent purple lips heavily veined with gold which sometimes extends to form two golden "eyes". Not the easiest species to grow it is probably better suited to warmer areas than cooler unless given some heat. We grow it in our warm glasshouse where it flowers for us in late spring or early summer. It likes a fairly even temperature and must be repotted when in active growth in the warm months. Parent of many exhibition yellow hybrids.

Cattleya bicolor: another tall-growing Brazilian bifoliate which carries up to 10 pale green to brown flowers with rose lips. The flowers average 8cm. The lip is

unique in that it has no side lobes whatsoever making this an easy means of identification. We find *C.bicolor* must only be repotted when its roots have started their season of growth which is late spring for us. It likes plenty of moisture while growing. It does not have the thick pseudobulbs of many other *Cattleya* species and so is unable to store as much water. As it flowers in later summer then rests through winter it is a good species to try in cooler areas.

Cattleya bowringiana: a strong-growing bifoliate from Honduras and Guatemala, this bears wonderful clusters of up to 20 rosy-purple 8cm flowers with some yellow markings in the centre of the lip and a white throat. It is an easy grower and a good one to try in cooler areas. It starts to grow in spring and can produce 60cm new pseudobulbs between October and late January. These flower as soon as they are fully developed, usually by March. It should be repotted as the new root flush begins, usually December, regardless of the fact that bud sheaths may then be evident.

Cattleya dormaniana: this slender growing bifoliate comes from a very restricted and very high rainfall habitat in Brazil. It carries 1 or 2 flowers about 8cm in diameter which vary from pale olive brown to darker chocolate, with a dark purple, white throated lip and rosy side lobes. It flowers in summer. Its slender stems and its habitat give the clue that it needs plenty of moisture and even during its winter resting period it should not be allowed to dry right out. It grows well for us in a teak basket with an open bark medium.

Cattleya elongata: this Brazilian bifoliate species is still quite uncommon in cultivation in Australia. It seems to be unique among the bifoliate Cattleyas in that it is a lithophyte (rock grower) in nature. It loves very bright light. It grows through spring and summer then rests until winter when it flowers from dry bud sheaths. It has 9 to 10cm shiny brown flowers with purple lips on a flower stalk which can reach 80cm in length. Because of its flowering season perhaps it is not the best species to attempt to grow in cool conditions.

Cattleya forbesii: whilst not as showy as some, this species from southern Brazil is a small, easy grower which flowers in summer with 7cm pale greeny-yellow flowers. It grows easily on mounts and live trees and makes great specimens. Definitely worth growing in cool areas, it contributes small size, a neat habit and cool tolerance to its hybrid offspring.

Cattleya gaskelliana: this large-flowered unifoliate hails from Columbia and Venezuela. Worth trying in cool areas this species starts growth in October and is often in flower in January having produced its entire new growth in less than 3 months. Carlo Aulisi (5) states that *C.gaskelliana* is found between 800 and 1,500 metres above sea level in a climate where the temperature ranges from 15°C to 30°C. Nevertheless we find it grows well in a our shadehouse where winter temperatures occasionally fall to 6°C. Keep it dry in the winter. Basic colour is pale rosy lavender with a darker lip. There are some nice alba varieties available.



C. bicolor var. *braziliensis.* A tall-growing richly coloured bifoliate.

Cattleya guttata: another Brazilian bifoliate with slender pseudobulbs sometimes exceeding a metre in height. This species is often confused with *C.leopoldii* from which it differs by having more but smaller flowers, green spotted with purple, the lip white basally with a magenta mid lobe. *C.leopoldii* has fewer but larger flowers which are brown with a magenta lip. *C. guttata* completes its growth in autumn then rests to flower in early spring from dry bud sheaths. According to the literature its habitat is warm, even in winter so it is not the best species to attempt to grow cool.

Cattleya intermedia: this medium sized Brazilian bifoliate has over 100 named varieties. It grows easily and flowers in spring producing up to 6 flowers about 10cm in size. Colour varies from pure white with no yellow at all to dark rich purple. The splash-petal form known as var. *aquinii* has petals which resemble the lip. It is the progenitor of many of the modern splash-petal hybrids. It is worth trying *C. intermedia* in cool climates. It sometimes produces successive growths in summer and autumn which both then flower the following spring.

Cattleya labiata: this lovely Brazilian unifoliate produces its 15cm rosy mauve flowers with a rich crimson lip in autumn. It commences growth in spring, needs light, warmth and water during summer then a drier rest in winter after flowering. Although it comes from a warm climate its growth and flowering habits make it a can-



C. loddigesii – a popular species which adapts to a wide range of growing conditions.



C. mossiae – its distinguishing feature is its beautifully patterned lip.



C. lueddemanniana var. *semi-alba aquinada* 'No. 2'. A richly coloured Venezuelan species.



C. skinneri var. *alba* 'Fairymount'. The result of some line breeding.

didate for cooler areas.

Cattleya loddigesii: this Brazilian bifoliate species resembles *C.intermedia* vegetatively. It carries up to 10 dark lilac 10cm flowers, usually spotted with darker purple. The side lobes of the lip are white, making a nice contrast. *C. loddigesii* flowers from autumn through to early spring. If grown warm it can produce winter growths which flower in spring. Often confused with *C.harrisoniana* which is also very much worth growing, both these species will grow in cooler areas. See the literature for the differences between these two species.

Cattleya lueddemanniana: this magnificent Venezuelan unifoliate is one of the progenitors of the best modern dark purple exhibition *Cattleya* hybrids. The typical form has three or four pale rose-purple 20cm flowers with very full petals. The beautiful lip is amethyst with a yellow throat and darker tesselations on the midlobe. There are also *alba, semi alba* and *coerulea* varieties and some very dark purple ones. This lowland species likes an evenly warm climate with plenty of humidity. For us it flowers in late spring and summer. It is not a candidate for cool culture.

Cattleya mossiae: another gorgeous Venezuelan unifoliate species with about 4 flowers averaging 16cm. The usual colour is in the pinky lilac tones with a lip beautifully patterned with yellow and violet veins. It is said that no two clones of *C.mossiae* are the same. This species flowers in spring, after a dry winter rest, from growths matured the previous summer. Carlo Aulisi advises that its habitat is between 800 and 1,500 metres above sea level where temperatures range from 27°C to below 12° on cold winter nights. Because of its growth and flowering patterns and its natural habitat *C. mossiae* is well worth growing in cooler areas.

Cattleya percivaliana: yet another Venezuelan unifoliate, this is a relatively small grower with 10cm rose-lavender flowers and a bright purple lip with a golden throat. It blooms in winter. It grows both epiphytically and as a lithophyte at considerable elevations where temperatures drop below 10°C on winter nights. It is thus a cool grower but it needs to be put under shelter in winter to protect the blooms. The plants grow into specimen size quite quickly having a tendency to produce multiple leads.

Cattleya schilleriana: a small-growing Brazilian bifoliate species, this is a good companion for *C.aclandiae*. The 9cm flowers are brown heavily spotted with red-purple. The lip is striped with purple white and pink. The plant has a very limited range. It starts growth in early spring, grows rapidly and flowers on the newly matured growths in late spring and early summer. As temperatures in its habitat fall

to 8°C in winter it should grow in cooler areas provided it is kept on the dry side over winter. As a small grower with thick roots we find it does best on mounts rather than potted.

Cattleya skinneri: a bifoliate species from Central America, it is the National Flower of Costa Rica. It bears up to 12 or so 8cm flowers in clusters. The colour is a clear rosy purple with a white throat in the lip. There are white forms, almost always with a spot of colour in the throat. It blooms from late winter to spring after resting, with its growths matured from the previous summer. It appreciates a cool and dry resting period in winter so should grow in cooler areas under cover to keep it from winter rains. This species branches readily and makes wonderful specimens.

Cattleya trianaei: this is a glorious Columbian unifoliate species. it is quite variable but the usual form is around 16cm across, pale rose lavender with a crimson lip with white and gold in the throat. There are *alba* varieties, splash-petal forms (var. *mooreana*) and some wonderful full-shaped natural tetraploids. This species seems quite temperature-tolerant but as it flowers in mid-winter after a rest it should be keep under cover to protect its blooms. Warmth at flowering time will enhance the size and quality of its blooms.

Cattleya violacea: this is a medium size bifoliate species from the tropical areas of northern South America. it carries up to 6 lovely 10cm flowers. As the name suggests, the usual colour is a pinky violet with a darker purple violet lip. Some very rare *alba* and *semi alba* varieties exist which to me are among the most beautiful of all orchids. The species requires warmth coming as it does from hot humid lowland riverine jungles. South of Brisbane it probably needs a warm house where the winter temperature does not fall below about 12°C. It grows well in baskets in a coarse open medium and on mounts provided it does not dry out. It seems to bloom throughout the warmer months as it matures new growths. The hybrids of *C.violacea* seem to be much more temperature-tolerant. it looks to be an excellent parent, lending its clarity of colour, heavy texture and flat profile to its progency.

Cattleya walkeriana: another small-growing, thick rooted Brazilian species, this one bears 1 or 2 flat-profiled 10cm rosy lilac flowers in autumn and often again in spring. The flowers often emerge from a separate growth arising from the base of the latest pseudobulb but can also be borne from the top of the bulb in the usual *Cattleya* fashion. This species grows both as an epiphyte and as a lithophyte in high light with very good air movement. In some parts of its habitat the winter temperature can drop to near-freezing but *C. walkeriana* is protected from frosts by growing in situations where cold



C. trianae 'A.C. Burrage. A full-shaped winter flowerer.



C. percivaliana 'Jewel'. A beautiful semi-alba form of a cool-growing winter-flowering Cattleya.



C. mendelii. A summer-flowering Columbian species.

air drains away rapidly. It will grow in cooler Australian areas with protection from winter rains. It prefers to be mounted on cork or rough-barked branch sections for us.

Cattleya warneri: this is a southern Brazilian unifoliate which resembles *C. labiata* except that it flowers in Spring without a rest period. Our plants start new growths in August and are in full flower from those growths by late October. It is a very rapid grower. It should be a good species to grow in cooler areas having regards to its growth and flowering habits. The flowers can reach 20cm and although many clones can be of open shape it is recommended for its ease of culture, free-flowering nature and attractive fragrance.



C. leopoldii var. *immaculata.* Cluster-type Brazilian bifoliate.

Cattleya warscewiczii: this Columbian unifoliate has the largest flowers of all Cattleya species – up to 23cm. The flowers are rosy mauve in colour with a huge rich purple lip containing two clear yellow "eyes". This latter feature is frequently seen in its hybrid progeny. For us the species starts growth in late August, completes it in early December and flowers immediately. It completes its rooting cycle in summer then rests for nearly six months. We find it flowers well after a long cool dry rest exposed to bright light but without being dried to the point of dessication. It comes from quite high altitude and should certainly grow in cooler areas if given the rest period described above. *C.warscewiczii* is also known as *C.gigas* which is a synonym. An earlier generation of French cut flower growers apparently called it *"Cattleya chou"* – meaning cabbage – because for them it was so easy to grow and flower. I sometimes wonder if our forefathers had some growing techniques they did not hand down!

Several of the species not described above such as *C.iricolor, C. kerrii, C. jenmanii, C. mooreana* and *C. tenuis are* not yet very common in cultivation in Australia. Although we have seedlings of most of these growing quite well I cannot make any observations about how to grow



C. harrisoniana – often bears larger and brighter coloured flowers than its near relative *C. loddigesii.*



C. bowringiana var. *coerulea* – a "blue" variety which has been used to breed blue hybrids.

adult plants of these except for *C.jenmanii* which we grow in the warm house. Much useful information, particularly about natural habitats, will be found in the list of references at the end of this article.

Many *Cattleya* species are under severe threat in their natural homes. Whilst overcollecting has contributed to their decline the worst threat is from habitat destruction caused by clearing for settlement, agriculture, mining and the like. Fortunately many growers and commercial nurseries round the world are raising *Cattleya* species from seed. We are starting to see in Australia the result of raising and linebreeding significant populations of Cattleya species. for instance *Cattleya loddigesii* 'Martinique' has been selfed and several of the progeny have already received high awards in this country. For a number of reasons beyond the scope of this article it is most important to preserve the species. After all, if we did not have the species then we certainly would not have the gorgeous *Cattleya* hybrids we see on the show benches today. Raising good numbers of species from seed and linebreeding to perpetuate their best traits gives the hybridists a whole lot more options in breeding for new and improved hybrids.

Finally, not only do we lose when one of the world's species becomes extinct. Not only is its specific beauty and its gene pool lost to us but we can never show it to succeeding generations of orchid growers who certainly would not thank us for allowing it to disappear. So, please look after your species Cattleyas – they are truely precious.

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C. intermedia var. *amethystina 'Blue Lip'* – one of scores of varieties of this adaptable Brazilian species.



C. labiata. On which the genus was founded.



C. intermedia var. *alba 'Lines'*. One of the largest flowered forms of this popular species.

"Coming to Ecuador"

Text and photography by Ray Thomson

Due to the tremendous interest shown in Ray Thomson's feature article on the "Orchids of Ecuador" (August and October 1996 AOR), he now gives some sound advice for those who intend travelling to Ecuador.

In Cuenca, Southern Ecuador you will find clean and economical hotels right in the centre of the city. Cuenca is a recommended starting point for your orchid explorations.

Close by runs the River Tomebamba where, because of the architecture, you will believe you have returned to the 16th century. In town, there are markets galore and the shopping is good, especially if you have bargaining skills. If not, a guide will negotiate on your behalf. Prices on many other goods, e.g. watches, are way below duty free! Film though is expensive and you will need plenty!

as the proud Cuencanos display and flood light their famous churches and historic buildings to stunning effect. Many Ecuadorian buildings are around 400 years old and contrast incredibly with modern air conditioned supermarkets. There are as great. The speciality of the area is the cool growing section of all genera endemic to the Andes.

The University of Cuenca has long been at the forefront of practical methods of conservation including in vitro work and a visit to the university nurseries could be arranged. At this nursery, there is to be found a good cross section of orchids of the area, while within an hour by car, just a Sunday afternoon drive in fact, you can be observing Oncidiums and Pleurothallids within an overwhelming variety of genera and others including Epidendrums, Encyclias, Hofmeisterella



Your exploration of Ecuador may well start in Quito. This fascinating city, once an Inca stronghold, is overlooked by the world's highest volcano,Cotopaxi. Quito can be a starting point for orchid exploration to the north.

Several Indian markets in the city of Cuenca display a range of traditional goods and especially textiles where sweaters, waistcoats and even a colourful ladies traditional Indian skirt with complimenting jewellry may be purchased. If you have an allergy or other persistent sickness an Indian medicine woman will, for a small fee, perform her magic with herbs and words. I am informed it works and I have seen it!

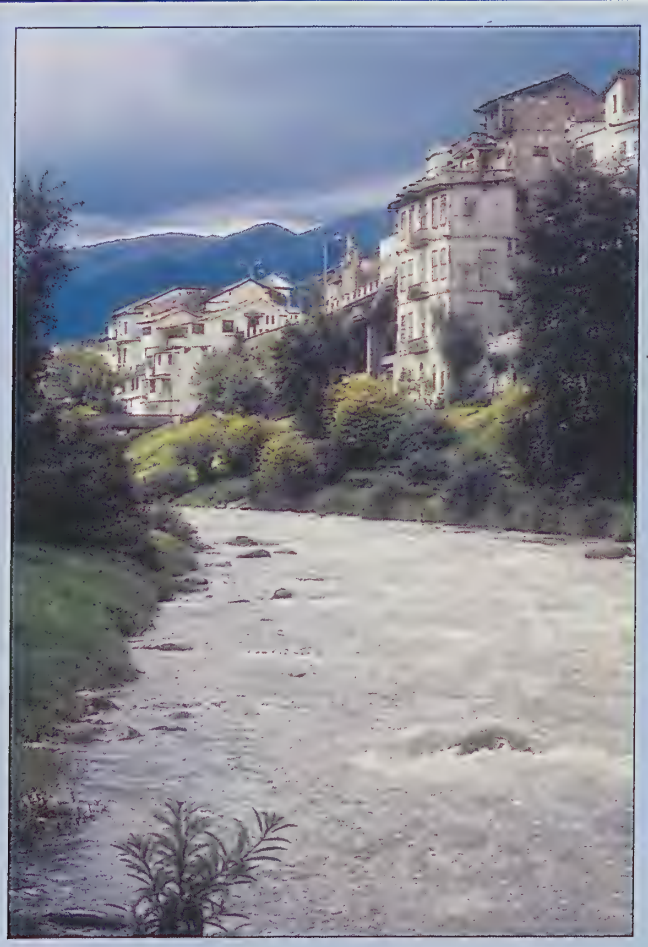
Cuenca by night is a magical experience well Inca ruins right in the centre of town.

Restaurants specialising in local food abound, but check out the cleanliness first. *Don't* eat from street stalls. This is the shortest route to both an upset tummy and ruined itinerary. Silver/leather/sculptures and paintings may best be bought in the town close by, specialising in these articles. Prices are unbelievably low for exceptional quality local goods.

If you have come to observe orchids, the going gets a bit rougher but the rewards are and Trichoceros.

Day trips will see you in the habitat of Masdevallia, Dryadella, Odontoglossum, Cyrtochilums and Nanodes, just for starters and don't forget the incredible variety of Bromeliads, Cactus and Tillandsias.

Further afield and venturing into the Oriente, or the Amazonas, those genera preferring a slightly warmer climate will be found and include Comparettias, Gongoras, Stanhopeas, Maxillarias,



Take a modern jet from Quito for the 45 minute flight along the Avenue of Volcanoes, to Cuenca in the south. It appears that for 400 years time has stood still in this delightful Ecuadorian city as many of the traditional buildings are original Spanish design and in good repair. Use Cuenca for your orchid treks to all points south and including the Amazonas to the east.

Masdevallias, Sobralias, Cyrtochilums and in season, spectacular terrestrials. These tours require a journey of perhaps three to four days from the base in Cuenca, with simple but safe hosterias along the way. Head for Limon and Macas.

On the way to the Amazonas, observing the spectacular Andean scenery of unbelievable views, magnificent rivers and waterfalls are bonuses. Small groups are recommended, often no more than six persons can be accommodated in the small hosterias/hotels along the way. You should be fit with no respiratory or heart problems. Remember, altitudes are high in the Andes and you will be affected. Good travel insurance is mandatory too!

Getting There

There are two routes to Ecuador. Through the USA offers the opportunity of stopovers, e.g. American Airlines flies from L.A. or San Francisco to Miami and then direct to Quito in Ecuador. Continental flies from L.A. or San Francisco through Houston, Texas, then to Panama City, Panama, before the direct flight to Quito. Stopovers are possible. Of course you could fly there through Europe but I have no knowledge of this path. I understand Qantas, in association with Lan Chile, will shortly offer direct flights Sydney/Santiago, from where a direct flight with Saeta of Ecuador is possible.

An interesting variation may be with Aerolineas Argentinas, from Sydney/



The Galapagos is Ecuadorian territory and as you are so close why not take the opportunity for a visit? The wildlife of these islands are unique, with each island maybe having flora and fauna found on no other. As seen here, Flamingos and Galapagos Seals co-habit and observation is easy as the animals appear not to have a fear of man.

Auckland and then direct to Buenas Aires, Argentina, then on to Rio in Brazil for a connecting flight to either Quito or Guayaquil, Ecuador.

Average cost for a two months return ticket appears to be in the vicinity of 2,300 to 2,500 Australian dollars, that is return to Quito or Guayaquil, Ecuador. With the stopovers available, that's a bargain. Shopping around for the best fare could be recommended, but take care, many agents have never hear of Ecuador, "where's that?" is a common question.

These are only suggestions, you find your own way to Ecuador but, spend a day or so in Quito and don't forget the Galapagos is only a day away, should you be interested in Darwin's old stamping ground, it's worth it!

Normal tariffs are around US$20 per person per day bed and breakfast with all facilities. Orchid guiding services are maybe $100 per day per group. (A group is up to five or six people.) This should include a knowledgeable known guide, the vehicle, but not including fuel, provisions or accommodation as necessary along the way. In all cases there will be "extras" and you should be prepared. Fees for other tours such as markets, Inca ruins, etc, by negotiation with your specialist guide. Business is mostly done in US dollars but, in the country, for markets, you need the local currency, sucres. I always take a Mastercard/Visa which is readily accepted and good for large purchases or other air travel which is incredibly cheap in Ecuador, e.g. the 45 minute flight from Quito to Cuenca along the "avenue of volcanos" costs only around $50/60 dollars for a flight on a modern 727 jet.



Something from "Jurassic Park"? No, just another of the fascinating life forms to be found in the Galapagos. Iguanas are possibly one of the most interesting of all animals as they are amphibious, spending a great deal of time foraging on the sea bed for algaes and grasses which is their main diet. Reach these islands by taking a 90 minute flight from the Ecuadorian city of Guayaquil.

On your credit card, banks give a cash advance in either the local or US currencies. In Quitto I have always received a good rate for Aussie dollars but this exchange is not available in Cuenca. Travellers cheques in US dollars are a safe bet anywhere. Warning, don't change money on the street and beware of the folded note trick! I also advise you not to wander around on your own.

This is basic information only. Check with your local travellers medical service regarding requirements for health precautions, medicines and clothing requirements. Malaria, cholera and rabies as well as other nasties are not as well controlled as in Australia so beware. With common sense however, and attention to basic principles of hygiene, your trip will be pleasant and rewarding experience.

Ray Thomson
Cert. T.C. Hort. Aust. IAPTC. Dip.
Cuenca, Ecuador

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- *Gongora superflua*
- *Paphiopedilum wardii* x *sib*
- *Maxillaria porphyrostele*
- *Cymbidium hookerianum*
- *Paphiopedilum concolor samogeni*
- *Dendrobium crispilinguum*
- *Renanthera imschootiana*
- *Diplocaulobium aratriferum*
- *Maxillaria chrysantha*
- *Paphiopedilum haynaldianum* var. *album*
- *Angraecum didieri*
- *Acampe ochracea*
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Paphiopedilum haynaldianum var. *album*

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Dendrobium antennatum Lindl.

Dendrobium antennatum is the type species for the section Spatulata. It occurs in coastal and subcoastal parts of the islands of New Guinea, New Britain, New Ireland, the Solomon Islands and on Eastern Cape York Peninsula. It is usually a species of the hot steamy lowlands, but has been recorded up to 1200 metres. The usual habitat is lowland rainforest and open forest usually in exposed situations and is often abundant in coastal situations such as on *Calophyllum* trees overhanging the water or on mangroves. On Cape York Peninsula in northern Australia it occurs on small trees in lowland creek beds and in open rocky areas near waterfalls, all positions where there is good light, good air movement and a humid atmosphere. This species often occurs in association with ant plants and other epiphytes.

The Australian occurrence is interesting as it is confined to a few creek gorges on the eastern side of the McIlwraith Range. It has the appearance of a species which may have migrated recently as wind or possibly bird borne seed from New Guinea. This is borne out by a lack of variability in the Australian specimens and by the lack of plants in several apparently suitable habitats in the Iron Range area.

The species was described in 1843 by John Lindley from a specimen from the northern coast of New Guinea. In 1878 H.G. Reichenbach described *D.d'albertisii* from a specimen collected by the Italian explorer and adventurer Luigi D'Albertis who explored the Fly River and collected many specimens of birds of paradise for European museums. The specimen presumably came from the coast of Papua. Dr Phillip Cribb in 1986 confirmed that *D.d'albertisii* is in fact only a rather small flowered form of *D. antennatum* and the two species are now regarded as synonymous. The name "antennatum" comes from the resemblance to the horns of an antelope and the species is often known as the "antelope orchid".

It is one of the smaller of the species of the section *Spatulata,* with pseudobulbs growing to about 40 centimetres long. The pseudobulbs are yellow with a roughly four-angled, swollen base and a slender apical part which bears the succulent leaves and the flower spikes which vary from quite short to 50 centimetres long. These arise from the nodes on the slender part of the stem, often on the older leafless pseudobulbs. The flowers are green and white with purple veining on the lip and the colours are very clear-cut in contrast to the often rather dull or confused colours in many other members of the section. Flowers vary from about two to five centimetres in length and last about six weeks. They are persistent when a seed capsule is formed and may last for several months more, turning green in all parts.

This species will grow in a garden situation on a suitable host tree in tropical Australia or in a sheltered bush house at least as far south as Brisbane, but is very sensitive to the cold conditions of Southern Australia and a heated glasshouse is required in cooler climates. It does well in cultivation if given strong light and an exceptionally well drained mixture and a small pot. In some regards slab culture is best as the plant tends to spread rapidly and will quickly outgrow most small pots and large pots tend to retain too much moisture. It responds well to regular fertilising with a dilute general fertiliser. Grasshoppers are particularly fond of the flowers.

Further reading

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VALE – Father Norman Cruttwell

The Reverend Father Canon Cruttwell, the noted missionary and botanist died in England late in October 1995. He had spent most of his life in Papua New Guinea and was an authority on its flora particularly rhododendrons and orchids.

Norman E. G. Cruttwell was born in November 1916[1] at the seaside town of Minehead near Exmoor, England where his father was a junior curate in the Anglican Church. He was educated first at Radlett House School and Lancing College (a boarding school) on the Sussex Downs. Later, at Oxford University, he obtained a first class honours degree in botany and was offered a research fellowship to continue his studies but declined in order to go to Cuddesdon College for theological training.

Norman was made a Deacon in Winchester Cathedral in Advent during 1940 and ordained as a priest the following year when he was assigned to the parish of Basingstoke in Hampshire. He had for some years been interested in working as a missionary in New Guinea and took the opportunity of a visit from Papua by Bishop Philip Strong to offer himself for work there. He departed for New Guinea via Australia on a migrant ship in June 1946.

He was assigned initially to Menapi, about 40 km from Dogura across Goodenough Bay. However, he soon realised that there was a vast unevangelised area in the mountains behind and from 1948 began to explore this area, "The Daga", on foot often spending three or four weeks away on patrol. The result was the formation of three more mission stations. In 1966 Norman moved to one of these, Aguan, which was located on a pass of the Owen Stanley Range and about five days walk from Menapi.

It was at Aguan that his long standing interest in botany was re-awakened. Much of the flora was unknown and many dried specimens were sent to Kew, Leiden and the PNG National Herbarium in Lae. he was also instrumental in bringing many species into cultivation, sending seeds and cuttings to specialist societies and individual enthusiasts. Although orchids and rhododendrons were his major interest, Norman was a very competent general botanist in the style of the great naturalists of the 18th and 19th centuries.

In 1976 Norman moved to Goroka in the Eastern Highlands. The mode of his arrival is worth relating for it is still discussed in Goroka today and very much reflects his interests and character. The main part of his luggage was flown to Dogura on the coast, shipped by sea to Lae and hence by road into the Eastern Highlands. Norman himself managed to obtain a grant from the Australian Rhododendron Society to charter a light plane and fly from Aguan to Goroka via Port Moresby[2]. He arrived with one small suitcase and so many orchid and Rhododendron plants that it took three carloads to transfer Norman and his cargo from the Goroka airfield to the Rectory.



Norman and his mother, Christian admire a *Rhododendron (R. christianae)* originally collected by Norman in "The Daga" and named after her. Taken in our garden near Malanda, north Queensland during 1982.



Dendrobium cruttwellii is often found in mist forests on ridges at about 2000m. It is usually loosely attached to the trunks of small trees at about eye level. Flowers appear to be quite variable in size and colouring.



Bulbophyllum cruttwellii is occasionally seen in mist forests at about 2500. It is a pendulous species with very characteristic triangular to elliptic leaves. The tiny yellow flowers are born under the leaves.

In addition to his work as parish Rector, he commenced work on the development of the nearby Mt Gahavisuka Provincial Park and the Lipizauga Botanical Sanctuary. He officially retired from the Church in 1982 but was given a position by the Eastern Highlands Provincial Government to continue management of the Park and Sanctuary.

Unfortunately in 1991 his health failed and he was forced to leave Papua New Guinea. Although he some some time undergoing treatment in Townsville, he did not recover sufficiently to return to Papua New Guinea and retired to the College of St Barnabas in Surrey, England.

Norman's numerous published notes on the orchids and rhododendrons of Papua New Guinea are particularly useful in that they contain helpful information of habitats. Although far away in his last years, his interest in the flora of Papua New Guinea continued up to time of his death when we were corresponding on the publication and further development of his check list of plants of Mt Gahavisuka Provincial Park.

Many botanists who visited PNG during the last 40 years will have special reason to mourn his passing for he was generous with his assistance and willingly shared his extensive knowledge of PNG's flora.

His name is commemorated in at least three papua New Guinea plant species; *Rhododendron cruttwellii* Sleum., *Dendrobium cruttwellii* Reeve and *Bulbophyllum cruttwellii* J.J. Vermeulen. ■

Dr Geoff Stocker
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Malanda
Queensland 4885

1 Information on Reverend Father Canon Cruttwell's early life have been extracted from the autobiography of his mother (Cruttwell, C. 1993. The two lives of Christian Cruttwell, Nuprint Ltd, England).

2 Withers, R.M. 1976. The Reverend Canon Cruttwell Retires. The Rhododendron 15: 7-8.

High Altitude Orchids of Papua New Guinea

by Rev. Canon N. Cruttwell

Part 1

At the time of his passing Rev. Cruttwell was in the process of preparing a series of articles on P.N.G. high altitude orchids for publication in the A.O.R. Sadly now this cannot be.

The Rev. Norman Cruttwell delivered a lecture at the 8th Australian Orchid Conference in Townsville in 1983 entitled "High Altitude Orchids of Papua New Guinea" as a tribute to Rev. Cruttwell and with permission of the Townsville Orchid Society we republish this lecture.

I have collected orchids mainly from two highland areas. Firstly from the Daga country in the Milne Bay Province, which lies between Mts. Sickling, Dayman and Simpson in the Eastern Owen Stanleys and secondly from the Central Highlands around Goroka (known as the Eastern Highlands Province). In particular I am making an intensive study of the flora of Mt. Gahavisuka, where we have designated an area of 77.4 hectares (200 acres) as a Provincial Park, to be an Environmental Reserve. Within this I am developing a native botanic garden with the intention of concentrating native plants from all over Papua New Guinea for display and conservation. The idea of this was entirely my own, but I am supported by the National Parks Board, the Division of Botany, Lae and the Eastern Highlands Provincial Government, who employ me as curator. Having retired from active missionary work after 36 years in Papua New Guinea at the age of 65, I now have a new lease of life as a botanist, and able to exploit my life-long interest for the benefit of Papua New Guinea as well as assisting at the Church. In fact I have graduated from a curate to a curator!

I am not a taxonomist, and I rely very much on the work of Tom Reeve and Neville Howcroft among other, who with Philip Cribb of Kew and Paddy Woods of Edinburgh are currently revising the genus *Dendrobium* in Papua New Guinea. Of course we all draw extensively on Dr. Schlechter's monumental work on the Orchids of New Guinea, who actually collected on the other side of Mt. Otto just opposite our Park which is on the highlands side.

Having been asked to talk about highlands orchids, how do I define highlands? Papua New Guinea is 75% mountainous, and in many places the mountains come right down to the sea. They reach their maximum height in Mt. Wilhelm at 4510m (about 14,800ft.). The vegetation is altitudinally zoned from lowland through mountain to alpine. The mountain forests are further divided into lower, mid and upper, the last being the stunted elfin wood that precedes the tree line often developed on exposed ridges much lower down. I shall consider the Dendrobiums of the three middle zones. The alpine zone contains very few orchids, and most if not all of them can be found at lower levels.

The altitudinal limits are not constant and slope downwards as one proceeds south east, so that the mountains of the Milne Bay District have their zonal boundaries nearly 1000m lower than the N.W. highlands. This is partly due to exposure, as the country is far narrower to the east and the mountains form a single backbone.

The Lower Mountain Zone starts at about 500m in the East but more like 1300m in the west. Much of it is grassland and cultivation but where it is forest it is dense and homogeneous (unlike lowland forest). It is dominated by small leafed evergreen trees, notably Papua New Guinea Chestnut *(Castanopsis acuminatissimal)* and Oak *(Lithocarpus)*. In certain areas (e.g. Bulolo) there are two large stands of Araucaria, whose orchids are to be described by Neville Howcroft. The Mt Gahavisuka Provincial Park is situated mostly in this zone, extending from 2000 to 2600 (7000 to 8500ft.). This zone probably has the richest orchid flora, especially in genus *Dendrobium.*

In this zone there are many villages and gardens where most of the bush trees have been destroyed. There is extensive replanting of *Casuarina oligodon* for firewood and timber and as a windbreak round villages. Few orchids grow here, though *Diplocaulobium iboense* may often be seen as a decoration (a charm?) on the king posts of houses. Old Casuarina trees sometimes bear orchids, one of the commonest of these being *Dendrobium crispilinguum.* This is one of the few members of the section *Ceratobium* in the highlands.

It is a nice thing, though not as showy as the coastal Ceratobiums. Tome Reeve has discovered two more rather similar species in the Enga and Southern Highlands Provinces. They are *D. hamiferum* and *D. magistratum.* They have been published in the Orchadian. In the Daga country of Papua we used to find *D. cochliodes* with coppery red and yellow flowers with corkscrew petals. Its long canes grow on *Casuarina papuana* trees often overhanging creeks, a habit which it shares with *D. johnsoniae.*

We now pass to the largest flowered and showiest section of *Dendrobium,* namely section *latouria.* These on the other hand are almost all highland plants. They have been revised by Tom Reeve and Philip Cribb, and we can identify them with a fair degree of certainty. They are characterised by spindle or bottle-shaped pseudobulbs with a few leaves at the tip and terminal sprays of large flowers. They seem to like light and air and most of them grow high up on an exposed tree branches where they show off their flowers to perfection.

The most famous of these is *D. johnsoniae* named after an early woman missionary of the London Missionary Society. it has been adopted as the emblem of the Papua New Guinea Society. It grows from about 300m to 1000m, preferring Casuarina trees. It is a truly lovely species, especially when seen on a high branch against the sky. In my opinion all such orchids should be strictly protected.

Closely related to *D. johnsoniae* is the equally beautiful *D. rhodostictum,* in which the flowers point downwards and are best seen from below. The petals are greatly elongated and obtuse at the end. A beautiful form of it is seen on Bougainville popularly known as 'Kip's Special' after Kip McKillop who discovered it. The petals are more rounded and there is more purple on the labellum.

Very similar to *D. rhodostictum* but much smaller and favouring more shady situations is the unpronounceable *D. otaguroanum* formerly called *D. chloroleucum.* It is widespread in the Highlands.

One of the most floriferous of the Latourias is the 'whipped-cream' *D. forbesii* (we can drop the *var praestans*). It is extremely floriferous with foaming masses of cream white flowers, the ovary and the back of the sepals being hairy. In the Daga the people once decorated our church with it. I soon put a stop to that, but it provided me with a good stock of plants for my garden.

There is a whole group of Latourias with hairy sepals and ovaries and curiously convulted lips. The commonest of these is *D. macrophyllum* (formerly known as *D. musciferum*). It has large leathery leaves and robust pseudobulbs. It is rather a low altitude orchid of the foothills but extends up to 1300m in the Daga.

● Part 2 will feature in February, 1997 AOR.

City of Lismore Orchid Society Celebrates 50 Years

On Friday 16th August 1996 the City of Lismore Orchid Society became 50 years old. Its inception came to being by the efforts of Mr Arthur G. Hawkins who wrote to a few known orchid growers in the area, inviting them to a meeting in the old Court House Hotel to discuss the idea of forming an orchid society. There were eleven people in attendance and so was formed 'The Northern Rivers Orchid Society'. This name was kept until 1972. Other Societies had come into being in the surrounding areas by then and some confusion was being experienced with people thinking that by joining the Northern Rivers Orchid Society they had joined all the Societies in the district so it was decided a change of name was required.

On Saturday 17th August the Society celebrated with a dinner at Lismore Workers Heights Bowling Club. There were between 65 and 70 people in attendance including one member who had been at the Inaugural meeting. Mr Vic Lehman attended that first meeting with his mother and subsequently held a position on the Committee. After a few years Vic left Lismore to live in Sydney, he returned just over 10 years ago and rejoined the Society. His mother was awarded Life Membership in 1964 and remained interested in the Society until her death in 1989 at the wonderful age of 99 years.

There were four past Presidents plus many other past Committee members present at the dinner.

A book recording the history of the Society was given to all who attended together with a commemorative badge specially struck for the occasion.



"Cutting the cake". Inaugural member Vic Lehman and President Joyce Widdows.

During the evening Life Membership was awarded to member Ken Jones and President Joyce Widdows for their work and dedication to the Society. Mrs Hannah Hobbs was awarded the Orchid Society of New South Wales Meritorious Award for her work in researching and writing the history of the Society.

Vice President Max Gamble was Master of Ceremonies and is to be congratulated in the way he kept everything running smoothly. It was a busy evening for Max welcoming guests, reading congratulatory messages received, leading members and guests in toasts, presenting the Life Membership awards and persuading past President Percy Sheaffe and Inaugural member Vic Lehman to share some of their memories with us, some of which caused much amusement.

After a wonderful dinner President Joyce Widdows and Vic Lehman cut the cake.

Everyone voted the evening a great success. This is to be followed by our Anniversary Spring Show 19-21 September at Lismore Central Shopping Centre, where all our sashes and ribbons will be specially marked with '50th Anniversary 1946-1996', written in gold for a truly GOLDEN ANNIVERSARY!

Vic Widdows
Publicity Officer



Past and present Presidents. Back row from left – Jim Hartley 83-86, Percy Sheaffe 55-58. Front row from left – Tom Maxwell 76-78 and 93, Terry Wells 78-80 and 82, Joyce Widdows 90-92, 94-present.

WINTER & SPRING SHOWS

Orchid Society of NSW

For the second year the Orchid Society of New South Wales Ltd held its show in conjunction with the 2UE Garden Festival.

The number of societies displaying was decreased because the peak of the spring season for flowers had almost finished. Four affiliated societies displayed in Class 1; two displays in Class 2, one Commercial Display and two Table Top displays.

Best display in Class 1 went to North Shore Orchid Society, best in Class 2 to Bob McCue and Adrian Brown. Banana Coast Orchids awarded first in the Commercial Division and the Table Top was won by Tom and Edith Price.

Grand Champion was awarded to *Paphiopedilum moquettianum*, a very large flower of this genus displayed by B. McCue and A. Brown. This plant also won Champion Paphiopedilum Species.



Grand Champion *Paphiopedilum moquettianum* 'Peach Blossom' HCC/NSW. The best and largest type of this flower seen with a flower width of 116mm. – *Owner B. McCue and A. Brown. Photo: B. Long.*

Reserve Champion, was owned by John Mata, *Cymbidium* Lake Macquarie 'Winsome' and also Champion Standard Cymbidium.

Champion Hybrid Paphiopedilum went to *Paph* Echo 'Green Mist' owned by B. McCue and A. Brown.

Champion Phalaenopsis. *Phalaenopsis* Orchid World. 'Bonnie Vasquez' owned by David Lee.

Champion Intermediate Cymbidium *Cym* Akebono owned by M&L Bootes.

Champion Miniature Cymbidium *Cym* Last Tango 'Royale' owned by Kevin Hipkins. Kevin also displayed Champion Orchid not Specified *Masdevallia* Falcata.

Champion Exotic Dendrobium Hybrid and Champion Australian Native Hybrid were displayed by E&A Marks with *Dendrobium* Gion 'Pink Lady' and *Cym.* Little Black Sambo respectively.

Tom and Edith Price won two championships with *Sc* Royal Beau 'Princess' and *Oncidium* Sharry Baby 'Sweet Fragrance'.

Sarcochilus hartmannii won S. Hogarth Champion Australian Native Species.

G. Stewart from Ku-ring-gai Society won the Champion Plant exhibited by a Novice or Junior with *C. walkeriana* x *Bc* Donna.

Pre-eminent entry of the show was awarded to B. McCue and A. Brown for their display in Class 2. This won the AOC Certificate.

This show was the talking point of the 2UE Spring Festival.

Two Views of the 31st Tropical Queensland Orchid Council Conference

This year's conference was held in the country town, Charters Towers, in tropical North Queensland June 7-10 1996. This conference covered orchid societies from Darwin, Mt Isa to Townsville and all the clubs along the coast in tropical Queensland. Approximately 200 people attended, some coming from Tasmania and New Zealand. Another group from Blackwater toured the area by bus and included the conference in their trip. Some Sydneysiders expressed amazement that a tiny society of 20 persons could organise a three day conference and show for so many people. David Banks you may remain living in Sydney. I won't tell what you said about the ability of certain clubs to organise a raffle. Thanks for the lectures and entertainment you gave us. You made many friends but don't run overtime into my lecture in future.

This Charters Towers group of mostly elderly people did a magnificent job. Even Jack at eighty-three chipped in. The reins in true country fashion were held by president Daphne and the whip by secretary Sandra. I have seen large clubs fall apart under similar pressures but country frankness and friendship carried this group through unscathed.

"It has never rained in Charters Towers on the weekend that the conference was to be held". No worries, sixty-two years was quoted as the last such rain. No trouble with an outdoor BBQ said all. Yes it happened. Maybe the damper and corned beef that was served on the mine visit would have sounded better on the menu for the BBQ.

Considering the locals had to keep most of their flowers in their huge bush houses for the garden visits a great show of flowers was produced. The nearest club is over a hundred kilometres away. The winning foliage exhibited by D. Harrison came all the way from Sartina, 400 kilometres plus away. The Charters Towers Orchid and Allied Plant group had never had a flower show in a hall let alone at a conference show. Congratulations on a great job, well done.

The line dancing brought home memories of my childhood when I used to get in a lift that had mirrors on either side. When I was alone I could jump around and act the fool. Missed my chance to be famous as I think now it may be called line dancing.

Sam Scalia from Home Hill took home all the money with his champion cattleyas. Not an uncommon occurrence for Sam. One thing everybody gained from the conference was the ability to lip read. The hall had the worst acoustics I have ever encountered. There are things you can change and things you can't and it takes a wise person to tell the difference. All persevered and wisely enjoyed all but the speeches. Anyway it gave me an excuse not to laugh at patron Frank Slattery's usual tongue in cheek references to Queensland's lack of rugby league prowess. Just keep buying green bananas Frank we love to see you.

Bob Smythe
Show Steward



Grand Champion *Blc.* Sunstate x *Blc.* Colorchart x *Lc.* Royal Emperor 'Wade' – *Sam Scalia*

The Tropical Queensland Orchid Council traditionally holds its Annual Conference over the Queen's Birthday weekend (7-10 June 1996). The host this year was Charters Towers Orchid and Allied Plant Society Inc., a small group which had not previously organised this function. Their efforts were amply rewarded, with 191 registrants including visitors from as far afield as Katherine N.T., Wonthaggi Vic., and Bruny Island Tas.

The Organising Committee – Daphne Galea President, Sandra Smith Secretary, and Albert Coffison Treasurer – are to be congratulated on a first-class conference. Commencing with a hilarious cent sale, visitors experienced the renowned Towers hospitality through to the plant auction – the professional auctioneer was something else again – and the farewell smoko on Monday morning.

The lecturers, Ross Maidment, Bob Smythe and David Banks, were both educational and entertaining, while the plant show and sales tables were of a high standard. Visits to bushhouses and nurseries were as popular as ever and were supplemented at an industrial level by visits to Mt. Leyshon gold mine and the famous Venus Battery, and at a cultural level by visits to Thornburgh House and Ay Ot House, each of which has been tastefully restored.

A Grand Champion award to the catering which was excellent throughout. Imagine – as many Burdekin bugs as you could eat.

There was a grand welcome for our old mate Frank Slattery and his charming wife Jean. Frank has been Patron of T.Q.O.C. since its formation and hasn't missed a Conference. See you at Townsville in '97, Frank and Jean.

Thanks Charters Towers – please have another one soon.

Len Lawler,
Atherton



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Sutherland Shire Orchid Society

Catt's Nursery at Sylvania again hosted the Sutherland Shire Orchid Society show which ran over four days. Club members assisted the public with potting demonstrations, growing hints, interviews on the local radio station, and a wide variety of plants on the sales table. The quality of plants was praised by the judges and club President as being one of the best shows for several years.



Reserve Champion *Wils.* Christian Hamburger – *Mr and Mrs B. Crimmins*

Four well presented bench top displays greeted the visitor as they entered the show display area. These gained much attention from the visiting public and displayed the beauty of orchids when presented together in a decorative setting. Major award winners were:– Grand Champion of Show and Champion miscellaneous was *Odcdm.* Don Bivin exhibited by Mr S.T. Ho. This beautiful orchid contained well filled yellow and brown flowers on a branching spike. It was awarded an AM by the NSW judges after judging. Reserve Champion of show was *Wils.* Christian Hamburger shown by Mr and Mrs B. Crimmins. A very full red and white flower on a tall spike. Champion cattleya was *Blc.* Lyn Spencer 'Cha' shown by Mr S.T. Ho. This large white clone was been around for many years, but shown well it is a hard plant to beat. Champion Native orchid of show was *Sarc. falcatus* shown by Mr K. Wilson. A lovely large, glistening, filled in flower that caught the judges eye. Champion cymbidium was a very nice flowering of *Cym.* Lake Macquarie 'Winsome' owned by Mr B. Long. This plant had several spikes and was very well presented. Champion species was *Paph. sukhakulii* 'Delma' shown by Mr G. Hart. This was a large well coloured flower that displayed well on a strong stem. Champion intermediate was *Lc* Puppy Love 'Pink Beauty' owned by Mr I. Ware. A soft subtle pink that always appeals. Champion Novice was *Den. xdelicatum* shown by Mr J. Thelander. A nice specimen plant of good form and colour.

Many interesting plants were on display including *Arpophyllum spicatum* with seven spikes, *Paph.* Lebaudranum 'Paddy' with eight drooping flowers, a lovely flowering of *Den.* Gion 'Pink Lady', a lovely flowering of *Coel. flaccida* and beautiful natives such as *Den.* Kayla and *Den.* Katherine Banks.

The show concluded with the prize giving and raffle draw. All members went home pleased with the quality of plants and assistance they had given the public on orchid growing.

Gary Hart

South Australian Orchidaceous Society

The South Australian Orchidaceous Society again staged their colourful September Spring Show inside the Atrium Mall of the Burnside Village Shopping Centre.

Grand Champion was awarded to an eye catching white standard *Phalaenopsis* Schneewittchen 'Stan Johnston', owned and immaculately presented by Johnstons Orchids.

Reserve Champion went to a superbly flowered *Cymbidium* Jubilation 'Geronimo', shown by Phil Canala, and this was also First Division Champion.

Most outstanding Seedling was won by GurMac Orchids with *Paphiopedilum* Steve Waters.

Eve Jackson's green miniature *Cymbidium* Tommy 'Adelaide' gained Second Division Champion from a particularly well presented Second Division Composite display.

Once again the ideal venue and setting with natural light produced a most colourful and diverse show which was arguably Adelaide's orchid show of the year, with a large range of orchid genera viewed in their true colours.

The Show comprised of composite, group and individual displays throughout the Shopping Mall, each enclosed with wire mesh panels.

Johnstons Orchids was awarded Best Individual Display and the Best Group Display went to Ted and Lorraine Braddock and Alan and Iris Davies.

All of those members of our Society that participated, the prize winners, placegetters, judges and all the many willing workers who put in so much effort to produce such a successful show can feel justly proud of their huge effort.



Grand Champion *Phal.* Schneewittchen 'Stan Johnson'

Alan Davies

Shoalhaven Orchid Society

Everyone talks about it but no one does anything about it, the weather of course. It must seem at times the hole in the ozone layer is situated above the greenhouses of those who only grow orchids. At least it appeared that way to members of the Shoalhaven Orchid Society. Enough fine weather for a successful Winter show, but then it happened. Several weeks of wind and at the end of August, enough rain to make the ark builders nervous. And to top off our show preparation the temperature on set-up day raced to 35 degrees. Several plants of *D. speciosum* and *S. falcatus* were seen to be melting away and even though they were already at the venue, did not make it to the benches. In addition to this three members were attending the Rio conference and even though one left plants behind to make up the numbers, the show was down slightly in plant numbers. Of those plants which made the transition from the benches to the Table of Champions, two had more success than the others. For John Apperley, *Cymbidium* Winter 'Vet' was very prominent with three prizes. Champion cymbidium, the Leo Giles Memorial Trophy of Best Red Cymbidium and Champion Orchid of the Show. A deep red intermediate of full shape and an excellent labellum with the typical Winter Fire edging around all segments. A large pot of the native terrestrial. *Pterostylis* was an equally successful exhibit. Owned and grown by Erhard Husted in his usual superb manner, the tallest flowers were 600mm above the surface of the pot. A deserved Champion Native/Native Hybrid and Reserve Champion this clone was also awarded Most Pre-Eminent Exhibit. Erhard then prepared for his trip to the A.N.O.S. conference and show in Adelaide, no doubt with a warm inner glow as another terrestrial, albeit from the Mediterranean, was



Reserve Champion *Pterostylis baptistii* – *E. Husted*

awarded Champion Any Other Orchid. *Serapias neglecta* sub sp. *neglecta* is a chunky multi-flowering plant quite uncommon in cultivation. Seedling *Paphiopedilum* Small World x Carfax x Amanda 'Joyance' owned by John Apperley was judged Champion Paphiopedilum and with a few other class prizes this made John Most Successful Exhibitor once more. Keen orchid grower Ray Tucker showed his determination by benching plants in several sections after being released from hospital a few days prior to the show. Ray was prominent in the Vandaceous, Cattleya and Odontoglossum/Oncidium classes. One plant of which Champion in the latter section. *Wilsonara* Kendrick Williams 'Featherill' is a favourite of many and Ray grows it quite well. The flowers were well shaped and perfectly displayed on an attractively arched and branching raceme. Novices continue to impress with Mary Russell being Most Successful Novice Exhibitor with good exhibits in cymbidiums, cattleyas and oncidiums. A little red gem *Slc.* Dixie Jewel 'Suzuki' being awarded Champion Novice Orchid. Several other novices also featured with Vic Dawnes, R & N Westley, G & A Slaughter, Col Marstin and Phyllis Elson all putting in a good effort. The Fortieth Spring Show proved to be a crowd pleaser as the attendance was a great improvement on last year and to hear comments as "the most colourful show for some time" was most pleasing. Things such as that almost make the effort worth while. A change in set-up suggested by Show Marshall Stuart Crowther, contributed in no small way to this assessment. Thanks also to judges Kevin Wilson, David Wallace and Ron Miller for officiating without fuss or fanfare.

Alan W. Stephenson
Publicity Officer

Gosford and District Orchid Society

Gosford and District Orchid Society held its 46th Spring Orchid Festival from 15th to 21st September 96 at Market Town Gosford.

We were very pleased with the number of high quality exhibits which were well presented and a credit to our members.

The display was a blaze of colour and perfume from the blooms with wide variety of genera on display.

Potting exhibitions were held on several days and were well attended by the public.

Grand Champion Orchid of the show was awarded to a Green intermediate *Cymbidium* High Sierra x DAG exhibited by Peter Anderson displaying excellent shape and type and a worthy winner.

Reserve Champion went to K & H Kellaway with a *Cattleya* Cluster 'Trick or Treat' x Rimfire Mustard' a bright distinctive flower showing clearly its parentage.

Champion specimen was a *Dendrobium x* Delicatum also owned by K & H Kellaway which was a metre across and full of nicely shaped flowers.

Our thanks go to Market place, the local businesses and our members who once again showed their courtesy in making us so welcome and helping make our show such a success.

John Phillips

Wangaratta and District Orchid Soc Inc.

Annual show held over the weekend of 28-29 September at the Wangaratta Secondary College Hall was a wonderful display of orchids by club members from Wangaratta, Albury, Wodonga and surrounding districts.

Major winners were:–

Grand Champion: *Cymbidium* Masquarade No. 3, owned by Harold & Eileen Foster, Wangaratta.

Reserve Champion: *Dendrobium* Bardo Rose 'Enfield', owned by Geoff Milton, Albury.

Best Cymbidium: *Cymbidium* Masquarade No. 3, owned by Harold & Eileen Foster, Wangaratta.

Best Orchid by a Novice: *Maxillaria Picta,* owned by Margaret McDiamid, Wangaratta.

Best Other Genera: *Slc.* Hazel Boyd 'Lea', owned by Jill & Joe Wooding, Albury.

Best Australian native: *Dendrobium* Bardo Rose 'Enfield', owned by Geoff Milton, Albury.

J. & E. Hamilton Perpetual Trophy: *Paph hirsutissmum,* owned by Fred & Trudi Behrens, Wodonga. Best Floral Art: Florence Braumen, Wangaratta.

Many thanks to all exhibitors and major sponsors, to make the show a great success.

10th Annual Central Coast Orchidfest

The most famous of all orchid fairs held in Australia would no doubt be Kevin Hipkins ROYALE ORCHIDS ORCHIDFEST. The annual event started ten years ago at Royale Orchids premises at Woy Woy.

Every year orchid vendors come from far and wide to show their wares to orchid growers. It has a carnival atmosphere, as the vendors are housed in carnival type tents, the smell of B-B-Q snags drift around the grounds and many growers talk about their grand champions that they have bought from a previous fair.

This year's fair was greeted with a cold westerly wind, but this did not deter the early birds from being there at day break to search for a rare bargain or two! It was two days of sunny cold weather. Over the years the weather has been – well – it could be better. It was said that Kevin and his side kick from across the Tasman did a sundance to make sure that this year the weather would be perfect!

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This year there was a good range of orchid vendors for example, Austmoss from Tasmania were showing their range of *Sphagnum* packs for the orchid grower. John and Margaret Howell from Port Macquarie with the range of "Port Pots". These were certainly a hit with the orchid growers. Geyserland and Papa Aroha from the land of the long white cloud were displaying their latest plants. Ray from Tinonee was there as usual with a good range of orchid seedlings. Warnambool had an amazing showing of odonts and masdevallias. I noticed the master of the frilled neck lizard running around with a potential show winner (guess who?). Clive Halls from Mt Beenak had some glorious cold growing orchids for sale.

Two new faces this year were the stall manned by Sid Batchelor and Darryl Smedley. It was good to see Sid on deck and of course his amazing Aust. native hybrid seedlings. Darryl had a good selection of New Guinea orchid seedlings for sale. Darryl trades under the name of Oceana Orchids. Miriam Ann Orchids had their usual stall stocked with the latest in fungicides, insecticides, and a good range of fertilizers and orchid requisites. Eric and Meg Leggett were showing their latest in French phalaenopsis seedlings and mericlones. Yes, orchids for everyone. Even if you are an armchair orchid grower, Grant Smith was there with his excellent range or orchid books.

Graham Guest from Adelaide was there to launch his new book on cymbidiums as well as displaying his latest cymbidium mericlones. Kevin Black was telling all that they should buy some of his new cymbidium seedlings as for sure they were all going to be grand champions!! Wal Rhodes from Camira was showing his latest paphs.

Kevin himself has a large range of flowering plants and seedlings for sale, in fact he had something for everyone.This year was very successful as usual. The work behind the scenes by Kevin was tremendous. All orchid growers are indeed in debt to Kevin and his mother Alice for allowing so many vendors to use his wonderful premises and all orchid growers to be able to go one location to see the wares of so many commercial growers from around Australia. Let us all hope that the annual Central Coast Orchidfest continues for many years.

From all orchid growers – THANK YOU ■

Alan Merriman

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Southern Suburbs Orchid Society

It was that time of the year again – the annual Spring show was upon us. Friday afternoon saw people busily setting up their stands and chatting about their plants. The main topic of conversation seemed to be the lack of plants in bloom, but as always a satisfactory number appeared at the last minute.

By 8 o'clock on Friday night, everything was ready for the judges.

Marian Podolski always goes to so much trouble to set up his stand, and this year had a spectacular show of Phals.

The Takacs had a table stand of excellent natives – a *Den. kingianum,* which won first prize; *Den.* Regal Affair, *Den.* Keith x Kathryn Banks and a large *Den.* Warrior, to name a few.

On Dave and Carol Allen's stand, were some large *Cymbidium* Sleeping Nymphs – beautiful pure-colour blooms. They also showed Tracy Redderway, some big Wallamurra Jupiter and two baskets of Slipper Orchids.

Jan and Andy Leamon also had a small stand, with a big red *Cym.* Strathen Charlie (red in colour, as its name suggests) and *Cym.* Pebbles.

Gerry Shack's stand is always a pleasure to see, with red cyms and green cyms such as *Cym.* Elonora, along with several others.

The top-class Pure Treasure and Terama Beauty Cymbidiums and with some attractive miniature cymbidiums, were a feature of Vic and Elaine Pearce's stand.

Max Akham's table top stand with its Pleiones was also a delight. The Club stand was a riot of colour with the big greens and whites and many other genera.

Special thanks to MPOS for their stand which displayed a variety of orchid genera and

to all those who worked so tirelessly to contribute to the show's success.

Show Results

Pre-Eminent Award: *Lyc.* Koolena x Fiona – Rod Grant.

Best Standard Cymbidium: *Cym.* Illumination Trus. – Bert Cusack.

Reserve Champion: Fanfare x Oration – Keith Noss.

Best Species: *Den. moorei* – Vic Pearce.

Best Native: *Den.* Birana Charm – Steve Bato.

Kevin Johnson

Charity Festival of Orchids 1996

This was the third Charity Festival of Orchids to be held at Dayboro, a little community about 45 minutes north of Brisbane. The weather although threatening to be stormy, managed to stay fine until we were on our way back home. This all Aussie Native show held on Sunday October 6th, calls us back each year from Victoria, to find out what the northerners are doing with their breeding programs, and how they grow their plants, not to mention the orchids that find their way home with us.

There was a beautiful selection of *Sarcochilus* – with a sprinkling of colour, coming into what used to be a mostly white orchid. Not to be outdone the dendrobiums were glorious in their colour – some beautiful *D. canaliculatum* on display and other for sale for those of you lucky to be able to grow these. We are inclined to leave these for someone else to buy, as although we have a hot house we haven't been able to do them justice – better to leave them for those that can keep them growing.

Grand Champion Orchid of the show – *D. trilamellatum* owned by V. & B. Della.

Reserve Champion Orchid of the show – *Plect tridentata* owned by Glenn Harris.

Best *Sarc* species: *fitzgeraldii* 'Alba' owners Bev & Frank Simpson.

Best *Sarc. hartmannii: hartmannii* 'Reefer' x 'Dungog' – owners Bev & Frank Simpson.

Best *Sarc. falcatus:* Glenn Harris.

Best *Sarc.* hybrid other than *S. hartmannii* parentage: *Sarc* Peach Spots – owners L. & D. James.

Best *Sarc.* hybrid with *S. hartmannii* parentage: *Sarc.* Star Struck – owners Bev & Frank Simpson.

Best *Sarc. specimen: Sarc.* Fitzhart 'Wollumbin' – owners Bev & Frank Simpson.

Best species under 12mm: *Plect. tridentata* – owner Glenn Harris.

Best hybrid under 12mm: *S. roseus* x *hirticalcar* – owners B. & C. Anderson.

Best terete *Den.* species: *D. pugioniforme* – owners Heather & Barry Ennor.

Best *Dend.* hybrid other than *D.* Hilda Poxon: *D.* Golden King – owners Southern Cross Orchids.

Best *Spatulata Dend.* species: *D. trilamellatum* – owners V. & B. Dellar.

Best *Spatulata Dend.* hybrid: *D. trilamellatum* x *canaliculatum* – owners B. & C. Anderson.

Best *Dendrobium* specimen: *D. canaliculatum* – owners B. & C. Anderson.

Best 3 species any combination of Sarcs & Dends – Heather & Barry Ennor.

Best 3 hybrids any combination of Sarcs & Dends – Heather & Barry Ennor.

Best terrestrial: *Phaius tancarvilliae* – owners G. & J. Kimlin.

Best cymbidium: *Cym. canaliculatum* 'Sparksil' – owners B. & C. Anderson.

Best *kingianum* species: *D. kingianum* – owners Bev & Frank Simpson.

Best *Delicatum: D. Delicatum* – owner J. Mewburn.

This was the first time I had come across the species *D. trilamellatum,* a really beautiful northern species. This one being a very clean and well grown orchid, something the owners should be proud of – a well deserved win. The little species that received Reserve Champion really took my eye, it has given me something to aim for in our culture. Congratulations to our northern friends for putting on this "All Aussie Show" and thank them all for their friendship and hospitality shown to us over this weekend. Until next time.

Frances Wilde
Little River, Vic.

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AOR 011

Queensland Hospitality Awaits

by Les Vickers

Without doubt, orchid enthusiasts would regard Australian Orchid Conferences held Australia-wide as this country's foremost orchid event – an event that it would be great to be at, only if. It is, therefore, the goal of this article to assist readers in deciding to be in attendance at what promises to be a tremendous event. Brisbane does have a great reputation for staging big events – the 1988 World Exposition and the 1982 Commonwealth Games for example – and all with a generous serving of northern-style hospitality. Could your registration be not too long in coming?

An Australian Orchid Conference could be seen as comprising of a number of facets – informative and enjoyable lectures; an enormous orchid show held in conjunction; renowned commercial orchid nurseries showcasing their products and service; the attendant social life and additional activities; and finally, the attractions of the host city and its nearby regions. All these go towards the making of a tremendous orchid event – as is claimed in advertising circulating in various quarters, • *TOP Event* • *TOP Venue* • *TOP Location.*

The Organising Committee, utilising the resources of the Queensland Orchid Society and its affiliated societies, is definitely working towards the 14th Australian Orchid Conference being a *TOP Event.*

The Brisbane Convention and Exhibition Centre, Australia's newest and most technically advanced such facility, with its super-convenient location on the doorstep of Brisbane's central business district, is indeed a *Top Venue.* With the Centre well services with transport, there are endless convenient combinations of places to stay and means of commuting – staying on the Gold Coast and commuting by train might even appeal to some.

The author (a life-time Queenslander, 32 years of which he has spent in the State's capital) has to hold back considerably when describing the Conference's host city as a *TOP Location.* Seriously, spring is a great time in south-east Queensland – its temperature range of 16°C to 26°C makes for a most pleasant lifestyle.

A frost free location in Brisbane or in neighbouring south-east Queensland regions provides perfect orchid growing conditions – a basic shadecloth covered frame is appropriate for the majority of orchids grown locally. The climate enables the growing of warm growing genera with minimal heating. While reasonable success can be had locally with some cool growing genera, the author admits to envying growers in the southern states when it comes to growing masdevallias and odontoglossums. Brisbane orchid enthusiasts, though, need only crank up their car and head to nearby Toowoomba or Tamborine Mountain to savour the beauty of such genera.



Ted Gregory, pictured with one of his several specimen-sized *Den. kingianum* plants, is well known to many for his love of the cooler growing Australian dendrobiums. He became interested in orchids at the age of eight when living in the Gloucester Tops region in New South Wales. He rescued many orchids from clearing operations, reestablishing them in orchards, mainly on loquot trees. Now, he advises his fellow enthusiasts how to grow the likes of *Den. kingianum* into magnificent specimen plants. Ted will be one of the Conference lecturers.

Registrants remaining on after the Conference should seriously consider taking in Toowoomba's Carnival of Flowers, a major nearby event. This could be achieved by taking a Post-Conference Tour or by private travel. Accommodation at that time in Toowoomba would need to be arranged well ahead.

Various facets comprising a successful Orchid Conference were mentioned earlier. First listed was the series of lectures. Featured in 1997 will be a mix of excellent quality speakers from Queensland, other Australian States and overseas. Barring late changes, speakers and topics will be

International

Dr Phillip Cribb London
The Orchids of China; Orchids of the Malay Archipelago

Sheldon Takasaki Hawaii
Exciting new Hawaiian Bred Phalaenopsis

Roy Tokunaga Hawaii
Advances in Mini and Compact Cattleya Breeding Using Higher Ploidy

Prof. Harold Kooperwitz California
The Latest Trend in Breeding Paphiopedilums; African Species

Justin Tkatchenko PNG
Research, Teaching, Conservation and Development of Orchids in Papua New Guinea for the Benefit of Future Generations

Australian – Interstate

David Banks Sydney
The World of Species Orchids

Arthur Busato Katherine
Growing Vandaceous Orchids in Northern Australia

Bob Nicole Adelaide
Recent developments in Cymbidiums

Australian – Queensland

Dr John Frisch Rockhampton
Breeding Easy Orchids

Ted Gregory Mt Tambourine
Kingianum and Me

Ross Maidment Brisbane
Queensland Bred Cattleya and Dendrobium – Setting New World Standards

Stuart Heyden Brisbane
Blending the Genes – Hybridising Phalaenopsis with Dedication and Persistence

Dr Noel Grundon Atherton
AOC Award Judging – Recent Trends and Future Implications

John Woolf Toowoomba
Latest Trends in Sarochilus Breeding Within Australia

As of 31 August, 200 of an expected 600 registrants had registered or notified of their intention to attend. Of those 40 will be travelling over from Western Australia, which is very pleasing to see.

Planning for the Orchid Show to be held in conjunction with the Conference is progressing well. Prize money of $20,000 will be distributed amongst the 250 classes listed in the show schedule.

Fifty-two displays (34 by societies, 5 by individuals and 13 by nurseries) are claimed to date. Twenty-four Commercial Sales Booths are already arranged.

Social events for the Conference will be of the usual nature – a Registrant's Reception and a Gala Dinner. Other evening activities are scheduled. In addition to day and half day tours during the Conference, there will be an eight day both before and after the Conference.

Les Vickers

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AOR107

Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review *and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.*

The deadline for items can be found on page 3.

Address all correspondence to the Editor. "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

Santa Barbara International Orchid Show, Inc.

This spring, come to Santa Barbara California, USA to celebrate the beauty of more than one million orchids at "Viva La Orquidea" the 52nd Annual Santa Barbara International Orchid Show, on March 7, 8 and 9, 1997.

Already one of the finest orchid shows in the nation, the Santa Barbara show promises to be even better this coming year, with a new entrance, new exhibits, new sales space and a new look at the Earl Warren Showgrounds, Highway 101 and Las Positas Road.

"When you walk up to get your ticket, you'll see something that looks very festive," says Frank B. Cobb, Santa Barbara International Orchid Show Manager. "Inside, the orchids will be spectacular. The exhibitors go to extraordinary lengths to present their flowers in the most beautiful ways possible."

Commercial and amateur growers from across the United States, Pacific Rim countries and England will display their finest flowers. A vast selection of blooming plants will be for sale in an adjacent building.

The 1997 Orchid Show will also host the American Orchid Society's Spring Trustees Meeting, which will draw hundreds of world-acclaimed orchid experts to Santa Barbara for special meetings and lectures.

In addition to sponsoring the Orchid Show, Santa Barbara County growers have led the nation for the past 50 years in breeding orchids, and produce more Cymbidium cut flowers than any other group of growers in the United States.

A new Orchid Show brochure provides the history of orchid growing in Santa Barbara and spotlights seven local greenhouses open for tours during the weekend. Those greenhouses include the world's largest producer of Cymbidium orchids, Gallup & Stribling Orchids; Santa Barbara Orchid Estate, which specialises in orchids that grow outdoors; and Cal-Orchid, which offers a wide array of colourful orchid species and hybrids for all levels of orchid collectors.

For further information contact Show Secretary: Margaret Cavaletto (805) 967 6331, Publicist: Joan S. Bolton (805) 685 6311.

Townsville District Orchid and Allied Plants Association 40 Years Celebration

The Townsville District Orchid and Allied Plants Association this year celebrate 40 years as a club.

On Saturday October 5th, we celebrated with a birthday party at the home of Frank and Lorraine Tooth. After inspecting Lorraine's extensive collection of Cycads and palms, dodging peacocks (no tails were displayed, worse luck) and peahens and talking to the caged birds, we've got down to the business of celebrating. For a change from the usual BBQ tea, the committee decided on a roast dinner with vegetables and salad which was cooked on Frank's special BBQ.

After eating our dinner, a birthday cake made by our outgoing President, Lesley Verran, and iced by an ex-member, Bev Swan, was brought out to be photographed and cut. This privilege fell to two of the three foundation members present, Mrs Betty Bulland and Mr Tom Verran. Mrs Debbie Hodgkin, with the help of many members, put together some scrap books of photos and interesting articles from the past 40 years.

Photos taken at the party will be added to these scrap books for future references. Lorraine found some old costumes used about 15 years ago at a Christmas party, some of those present dressed up in these and many memories were stirred up and reminisced about.

After supper, catered for by club members, everyone went home with fond memories of the past 40 years and thoughts on the next milestone – 50 years. – ***Linda Feldt, Correspondence Secretary***

Australian Orchid Foundation

Campaign to Encourage the Growth of Orchid Species

The Directors of the Foundation wish to advise all "Friends of the Foundation" that the Protocorm and the Orchid Species Seed Bank is undergoing re-organisation in its operation to provide some evidence of its viability. Each batch of seed that is received, after testing, will be acknowledged within a reasonable time.

The demand is continual, and the species that may be common in your area, may well be sought after in another region. If you can persuade your friends or other members of your society to make sibling crosses, so much the better for putting something back into this fascinating interest.

Please send your dry orchid species seed, or green pod direct to:

Andrew Paget, PO Box 119, Mirboo North, Victoria 3871. Tel/Fax 056 681 650.

Andrew is a consulting botanist with a wide general knowledge of the orchid family, a member of the AOF who has freely offered his services that this segment of the AOF can be improved and avoid disappointment.

The Foundation accepts the Orchid Species Seed and the label in good faith. No guarantee can be given for the actual viability of the seed.

All current stocks of seed will be checked and tested and will be discarded unless each pass a fairly rigid test for viability.

For your requirements, supplies and current lists of availability, contact: Wayne Harris, 47 Dillon Road, The Gap, Queensland 4061. Telephone 07 3300 9387.

Costs have been kept extremely low to encourage our objects of practical conservation of the species.

Sterile tubes up to 20 protocorms $2.50 each.

Samples of orchid species seed $1.00 each, plus postage.

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VALE – Bert (Al) Thomson

Senior Orchid growers of North Queensland will be saddened to hear of the recent passing of long time orchid grower Bert (Al) Thomson of Atherton.

At the time of his passing Bert was holidaying with his daughter in West Australia.

Bert has grown orchids in Cairns, Gordon Vale, Innisfail and Atherton whilst employed as an inspector with the South British Insurance Company.

Ray Robinson

Masport Launches Garden Tractor Range

The first-ever Masport-branded garden tractor-style mower range has been launched.

Designed and developed specifically for Australian conditions, the new Masport range features four models aimed at satisfying around 70 per cent of the garden tractor market.

Masport's four models each feature the latest in garden tractor design, with advances in mechanical durability and cutting performance, simplified operation, an ergonomic seating position, and even sleek styling to reduce fuel consumption.

Power comes from Briggs and Stratton engines across the range, with one model featuring new overhead valve technology.

"The Masport garden tractor range is very price competitive ... we've deliberately pitched at the cost-conscious end of the market, and at first-time buyers," Masport's Sales and Marketing Manager Peter Wallace says.

"Each model is economical to buy and operate, and we believe offers better value than anything else on the market."

Peter Wallace says the appeal of the new Masport garden tractors will not just be based on price.

"The four models cover all major segments of the market, from buyers who have larger domestic properties, through hobbyfarmers, to serious commercial applications."

Masport's garden tractor range starts at the Model 1130, which is powered by an 11 hp Briggs and Stratton engine, and features a 30 inch single blade cutter deck and a Fender shift peerless 931-5 5-speed (forward) transmission.

Design features include small step-over frame size for manoeuvrability and a low-back adjustable seat for operator comfort.

The Model 12.5 IC 40 Masport garden tractor features a more powerful 12.5 hp Industrial/Commercial engine and six-speed transmission, to cope with heavier grass conditions.

A 40-inch twin-blade cutter deck helps decrease work time, and larger turf tread wheels improve traction and flotation.

The Model 12.5 IC 40 is also equipped with a Fender lift for easy raising and lowering of the cutter deck, and an Air Assist attachment to improve catching ability.



Model 1130

A larger step-through frame and high-back seat make the general-purpose Masport Model 14.5 OHV garden tractor one of the most capable around. Power comes from a 14.5 hp Briggs and Stratton Overhead Valve engine offering quieter operation and increased fuel efficiency.

Masport's top-of-the-range Model 18 IC 43 garden tractor verges on an industrial mower with its 18 hp Briggs and Stratton Opposed Twin engine and larger 43-inch twin blade cutter deck.

All Masport garden tractors come with a range of attachments, including catcher and mulcher kits.

Prices range from around $2600 to around $3800.

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For further information: Peter Wallace National Sales and Marketing Manager Masport Pty Ltd (03) 9586 7777.

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- Campbelltown & District Orchid Society
- Northern Territory Orchid Society

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AOR 069

Burke's Backyard releases their Soil pH Test Kit

Burke's Backyard has released its long awaited Soil pH Test Kit especially for Australian gardeners.

The Burke's Backyard Soil pH Test Kit is available by mail order for $15.50 from Burke's Backyard and has been manufactured in Australia by Manutec Pty Ltd to standards and specifications set by Don Burke.

The Kit is very simple to use and contains sufficient ingredients for between 50 and 100 tests. It comes complete with a comprehensive information booklet with all the information gardeners need to get the best out of their Kit.

Don Burke has been a consistent campaigner for the importance of pH to good gardening and aware of the lack of understanding of the subject among all but the most experienced gardeners. "The pH of soils – whether they are acid or alkaline – profoundly affects their functioning. Whether you are starting a new garden, introducing new plants or simply trying to get the best out of your existing garden, a reliable pH test kit is a valuable gardening tool."

Pot plants are also very susceptible to variations in pH and potting mixes should be tested at purchase and every few months because most fertilisers produce acidity, so lowering the pH with time.

The Information Booklet which accompanies the Kit explains what pH is and the importance of pH to plants. Importantly it then explains exactly how to go about changing the pH of your soil or potting mix if it is found to be unsuitable to your plants. The final section of the Booklet gives lists of acid and alkaline soil tolerant plants.

The Burke's Backyard Soil pH Test Kit is available by mail order from Burke's Backyard by sending a cheque or money order to PO Box 929 Crows Nest NSW 2065.

New Orchid Hybrids

MARCH/APRIL 1996 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY
		(O/U = Originator unknown)
ALEXANDERARA		
Starlight	*Wils.* Bubba Mock × *Brs.* Rex	Everglades
ALICEARA		
Ballerina	*Onc.* Memoria Ray Hardy × *Mtssa.* Aztec	J. Wagner (O/U)
ARANDA		
Bhuwaniprasad Pradhan	*Arach. cathcartii* × *V. coerulea*	Pradhan Orchid Lab.
ASCOCENDA		
Banjong Fragrance	*V. amesiana* × *Ascda.* Yip Sum Wah	B. Mianmanus
Banjong Pink Coral	*V.* Silvia Palmieri × *Ascda.* Yip Sum Wah	B. Mianmanus
Colin Walker	*V.* Mahakkaphongs × *Ascda.* Peggy Foo	K. Hiramatsu
Memoria Brad Majewski	*Ascda.* Norma Majewski × *Ascda.* Guo Chia Long	J. Majewski
Park Yon Kyoung	*V.* Josephine van Brero × *Ascda.* Orglade's Sandpebbles	Singapore Bot. Gdns.
Rania Rahardja	*V.* Miss Joaquim × *Ascda.* Remy Rodis	Y. Alsagoff
BOLLEANTHES		
Blue Mist	*Cnths.* Merion × *Bol. violacea*	Dr B. C. Berliner
BRASSIA		
Charlotte's Web	Edvah Loo × *chloroleuca*	H & R
BRASSOLAELIOCATTLEYA		
Amarillo Cherub	*C. luteola* × *Blc.* Yellow Imp	Marianne Matthews (Stewart Orch.)
Bouton Spirit	*Blc.* Bouton D'Or × *Lc.* Memoria Sangah Chit	D. Neuendorff
Burdekin Prophecy	*Lc.* Prophesy × *Bc.* Donna Kimura	S. Scalia
Cayla's Yellow	*Blc.* Ermine × *B. digbyana*	J. Grezaffi
Chiquita del Paraíso	*Lc.* Janet × *Blc.* Orange Nuggett	R. Sobrino
Comanche Moon	*Blc.* Andy's Chair × *Blc.* Papa Sam	Marianne Matthews (Stewart Orch.)
Delhi Shamsher Pradhan	*C.* Chocolate Drop × *Blc.* Ewart McDonald	Pradhan Orchid Lab. (K. Pradhan)
Elena Roggero	*Blc.* Edisto × *Blc.* Waikiki Sunset	E. & E. Roggero
Elsie's Baby	*Blc.* Orange Nuggett × *Blc.* Meditation	Ted Green (I. Takemoto)
Gordon Liddy	*Lc.* Peggy Huffman × *Blc.* Erin Kobayashi	Blietz-Wailea
Kitty Matheny	*Blc.* Glorious Green × *Blc.* Green Goddess	Lenette
Legend of Maui	*Blc.* Toshie Aoki × *Blc.* Goldenzelle	Blietz-Wailea
Memoria A-Nunt Meesangnil	*Blc.* Greenwich × *Lc.* Prem	S. Meesangnil (Puttan Orch.)
Niña del Paraíso	*Lc.* Drumbeat × *Bc.* Nina Rosada	R. Sobrino
Orange Watermelon	*Blc.* Eve Marie Barnett × *Blc.* Erin Kobayashi	Blietz-Wailea
Suan Puttan	*Blc.* Ports of Paradise × *C.* Moscombe	S. Meesangnil (Puttan Orch.)
Waianae Fragrance	*Lc.* Rising Sun × *Blc.* Painter's Brush	Miyamoto
BULBOPHYLLUM		
Peppermint Miss	*lobbii* × *capillipes* †	Suphachadiwong
BURRAGEARA		
Claret	*Mtdm.* Chad Rumfelt × *Oda.* Echanson	Everglades
CATTLEYA		
Green Emerald	Elizabeth Mahon × Thospol Spot	Orchis Flor.
Maria de Boet	Chocolate Drop × Chamberlainiana	R. F. Orchids ((O/U)
Pat's Purity	Albabetts × Friendly Belle	F. J. Bergman
Susan Beale	*forbesii* × Hybrida	P. Setty (E. Moll)
CIRRHOPETALUM		
Banana Split	*fascinator* × *mastersianum*	Suphachadiwong
Dancing Angels	Lovely Elizabeth × *fascinator*	Suphachadiwong
Sunny Boy	*mastersianum* × *rothschildianum*	Suphachadiwong
COELOGYNE		
Cosmo-Crista	Intermedia × *cristata*	Kokusai
COLMANARA		
Coronation	*Odtna.* Jungle Jog × *Onc.* Auntie Bea	Everglades

NAME	PARENTAGE	REGISTERED BY
CYMBIDIUM		
Angel Wings	Virginia Anderson × Rod Stewart	Everglades
Arcadia Glory	Arcadian Sunrise × Solana Beach	Mogami Ran-en (S. Ui)
Arcadia Glow	Arcadian Sunrise × Peetie	Mogami Ran-en (S. Ui)
Arcadia Moonlight	Rose Armstrong × Durham Castle	Mogami Ran-en (S. Ui)
Blue Flame	Grassy Waters × Yowie Flame	Everglades
Button's Raker	Buttons and Bows × Stanley Fouraker	S. Iida
Calvin Padgett	Peter Piper × Yowie Flame	Everglades
Christian Heritage	Mizuha Okada × Golden Elf	Everglades
Coco Chanel	Louis Phillippe × Miss Muffet	Glen. O. Acres (Keith Andrew)
Corker	Coraki × Rinneroon	Glen. O. Acres (Keith Andrew)
Crystal Breeze	Telstar × Via Tranquila	Mogami Ran-en (S. Ui)
Crystal Emotion	Rincon Lady × Stanley Fouraker	Mogami Ran-en (S. Ui)
Crystal Fanfare	Cherilyn × Fanfare	Mogami Ran-en (S. Ui)
Crystal Memory	Rose Armstrong × Via Mar Tranquila	Mogami Ran-en (S. Ui)
Crystal Moon	Sleeping Beauty × Christmas Morn	Mogami Ran-en (S. Ui)
Crystal Moonlight	Telstar × Cariga	Mogami Ran-en (S. Ui)
Crystal Promenade	Rose Armstrong × Christmas Morn	Mogami Ran-en (S. Ui)
Crystal Sachiko	Music Box Dancer × Pharaoh	Mogami Ran-en (S. Ui)
December Glow	Hiroshima Golden Cup × Lookout	Mogami Ran-en (S. Ui)
December Memory	Rose Armstrong × Lookout	Mogami Ran-en (S. Ui)
Dorset Bizarre	Devon Spectrum × Claudona	Glen. O. Acres (Keith Andrew)
Dorset Heritage	Devon Spectrum × Jolity	Glen. O. Acres (Keith Andrew)
Eternal Memory	Claret × Via Mar Tranquila	Mogami Ran-en (S. Ui)
Eternal Sachiko	Claret × Terama	Mogami Ran-en (S. Ui)
Fair Alice	Hazelbury × Fred Stewart	Glen. O. Acres (Keith Andrew)
Farago	Esmeralda × Vivien Hainsworth	Glen. O. Acres (Keith Andrew)
Frosted Beauty	Claret × New Horizon	Mogami Ran-en (S. Ui)
Frosted Starlight	Lookout × Solana Beach	Mogami Ran-en (S. Ui)
Gancanna	Hazelbury × Solana Beach	Glen. O. Acres (Keith Andrew)
Giovanni Sommariva	Trigo Royale × Pink Peach	Orchital (Schaefers)
Golden Nights	Golden Elf × Summer Nights	Everglades
Grand Canyon Suite	Bermagui × Caligold	G. W. Cole
Iced Mint	Siempre × Stanley Fouraker	Everglades
Ivory Cup	Pahokee × Rod Stewart	Everglades
Midnight Lips	Tender Love × Everglades	Everglades
Mother of Pearl	Hazelbury × Minuet	Glen. O. Acres (Keith Andrew)
My Sin	*sinense* × Ayla	Glen. O. Acres (Keith Andrew)
Nancy's Treasure	*parishii* × Mizuha Okada	Everglades
Oriental Breeze	Bagdemagus × Via Mar Tranquila	Mogami Ran-en (S. Ui)
Oriental Moon	Bagdemagus × Solana Beach	Mogami Ran-en (S. Ui)
Oriental Promenade	Carol Cox × Sarah Jean	Mogami Ran-en (S. Ui)
Parish Alex	*parishii* × Alexalban	Everglades
Parish Piper	Peter Piper × *parishii*	Everglades
Paros Paradise	Winter Paradise × Paros White	Mukoyama (A. R. Bryant)
Paros White	Palaker × Doreen Darwen	Mukoyama (A. R. Bryant)
Plum Passion	Rincon × Howard Cobb	B. & R. Uno (T. Koike)
Pure Sachiko	Music Box Dancer × Carol Cox	Mogami Ran-en (S. Ui)
Reverend Miriam Dulany	Tender Love × Candy Floss	Everglades
Scoop Memory	Rincon Lady × Valley Flower	Mogami Ran-en (S. Ui)
Spring Glow	Firewheel × Christmas Morn	Mogami Ran-en (S. Ui)
Spring Memory	Christmas Morn × Hiroshima Golden Cup	Mogami Ran-en (S. Ui)
Sunset Promenade	Red Beauty × Rose Armstrong	Mogami Ran-en (S. Ui)
Sweetheart Promenade	Terama × Trigo Royale	Mogami Ran-en (S. Ui)
Sweet Memory	Pipes of Pan × Peetie	Mogami Ran-en (S. Ui)
Sweet Nuptial	Devon Ranee × Fred Stewart	Glen. O. Acres (Keith Andrew)
Sweet Petrice	*sinense* × Lovell Lawrence	Glen. O. Acres (Keith Andrew)
Tequila Sunrise	Claude Pepper × Mighty Mouse	P. Jenzen (R. Kashima)
Unicef	Wild Colonial Boy × Giovanni Sommariva	Orchital (Schaefers)
Ura Knight	Urara × Valley Knight	S. Iida
Valleyra	Ura Flame × Valley Flower	S. Iida
Via Avanti	Cleo Sherman × Robert Rowe	Gallup/Stribling Int.
Via Haute-Pink	Memoria Francis Cobb × Solana Beach	Gallup/Stribling Int.
Via Luna	Betty Ford × Winter Fair	Gallup/Stribling Int.
Via Spring Snow	Cleo Sherman × Raquel Abril	Gallup/Stribling Int.
Western Promise	*sinense* × Western Rose	Glen. O. Acres (Keith Andrew)
DENDROBIUM		
Annie Tan	Nus Sudiono × Mari Michener	Y. Alsagoff
Battersea	Fuchs Blue Angel × Red Embers	Cairns Orchid Centre
Colleen Kawamoto	Snowfire × *phalaenopsis*	T. Yamaoka
Ellen Glow	Yellow Glow × Ellen	N. Finch
Heng Keng	Aprichart Rainbow × *stratiotes*	Y. Alsagoff
Hilda Hill	Aussie Ira × Ellen	S. G. Hill

NAME	PARENTAGE	REGISTERED BY
DENDROBIUM continued		
Jean-Luc Dehaene	Waianae Blush × Alkaff Melissa White	Singapore Bot. Gdns.
Jiara White Tower	Pale Doreen × Cholburi	E. Sanusi
Jooyee	Shadia × Meala	Y. Alsagoff
Kim Jian	Jiad Gold × *johannis*	Y. Alsagoff
Kylee	Heroine × Wave King	K. Hiramatsu
Lim Giok	Yoshie × Snowfire	Y. Alsagoff
Miya's Blush	Bandung White × Waianae Blush	Miyamoto
Ng Lay Wha	May Koh × D'Bush Pansy	Y. Alsagoff
Port	Heroine × Super Star	K. Hiramatsu
Red Embers	Norma Jackson × *gouldii*	Cairns Orchid Centre (O/U)
Sandy Canal	Gloucester Sands × *canaliculatum*	G. Freeman
Sutiawati	Jiara White Tower × *formosum*	E. Sanusi
Tan Meng Lee	Mari Michener × D'Bush Pansy	Y. Alsagoff
Tan Siok Tin	Laili Fareed × Joanna Mesina	Y. Alsagoff
Teen Ager	Kurenai × Milky Way	K. Hiramatsu
Toutoumi	Surugakomachi × Heroine	K. Hiramatsu
Waianae Profusion	Anching Lubag × Mildred Kazumura	Miyamoto
Walter Upton	*mirbelianum* × *nindii*	G. Freeman (W. T. Upton)
DIURIS		
Frogmouth	*drummondii* × *venosa* †	G. Nieuwenhoven
DORITAENOPSIS		
Carolina White Cloud	*Phal.* Carolina New Brighton × *Dtps.* Zuma White Puff	Lenette
Cat's Paw Sunset	*Dtps.* Gold Happy × *Phal.* Culiacan	D. & C. Plahn
Elisabeth Micha	*Phal.* Nancy Ogburn × *Dtps.* Cape Town	Pem Orchids
Feodor	*Phal.* Happy Buddha × *Dtps.* Kimberly Kmett	H. Wallbrunn
Goldrilla	*Phal.* Hausermann's Goldcup × *Dtps.* Pisgah Sands	H. P. Norton
Isabel Siragusa	*Dtps.* Happy Valentine × *Dtps.* Zuma Charmer	Zuma Canyon
Jeff's Gift	*Phal.* Vera Henderson × *Dtps.* Zuma White Puff	Colourfull Nurs.
Larina	*Phal.* Eye Dee × *Dtps.* Kimberly Kmett	H. Wallbrunn
Lohengrin	*Dtps.* Kimberly Kmett × *Phal.* Mivac Sweetissimo	H. Wallbrunn
Michelle Hausermann	*Phal.* Prairie Du Sac × *Dtps.* Mount Beauty	Hausermann
Minglee Lucky Stripes	*Phal.* Pinlong Davis × *Dtps.* Auspice Sunrise	Funcherng Lin
Minglee Snow Queen	*Dtps.* Orglade's Snow Crown × *Phal.* Noble White	Funcherng Lin
Minglee Snow White	*Dtps.* Orglade's Polar Dome × *Phal.* Noble White	Funcherng Lin
Minho Beauty	*Phal.* Taisuco Roseherz × *Dtps.* Taisuco Beauty	Min-Ho
Minho Pink	*Phal.* Taisuco Roseherz × *Dtps.* Sun Heart	Min-Ho
Minho Rose	*Dtps.* Taisuco Beauty × *Dtps.* Ton Jy Pecan	Min-Ho
Minho Valentine	*Dtps.* Happy Valentine × *Dtps.* Sun Heart	Sogo
Norman Wee	*Phal.* Nancy Ogburn × *Dtps.* Navarre White Chiffon	Pem Orchids
Pamela Simons	*Dtps.* Devonshire Earth × *Phal.* Crown Prince	J. Stubbings
Parsifal	*Phal.* Ida Fukumura × *Dtps.* Kimberly Kmett	H. Wallbrunn
Sogo Coral	*Dtps.* King Shiang's Beauty × *Phal.* Taisuco Lienhung	Sogo
Sogo Eagle	*Dtps.* Sun Prince × *Dtps.* Formosa Rose	Sogo
Sogo Treasure	*Phal.* Paifang's Auckland × *Dtps.* Okay Seven	Sogo
Super Ruby	*Dtps.* Okay Seven × *Phal.* Zuma's Pixie	Nan Kung
EPICATTLEYA		
Evelyn Shibata	*Epc.* Shimonishi Beauty × *Epi.* Lillian Yamada	Yamada Nursery
Helen's Pink	*Epc.* Shimonishi Beauty × *Epi.* Helen Yamada	Yamada Nursery
Krish's Delight	*C.* Susan Beale × *Epi. cordigerum*	P. Setty
Tamaru Muraoka	*Epc.* Shimonishi Beauty × *Epi.* Joseph Lii	Yamada Nursery
EPIDENDRUM		
Helen's Pride	Joseph Lii × Helen Yamada	Yamada Nursery
Jay Yamada	Lillian Yamada × Joseph Lii	Yamada Nursery
Michael's Rubelite	*haematanthum* × *cinnabarinum*	R. Giovinazzo (O/U)
Shizuno Muraoka	Helen Yamada × Lillian Yamada	Yamada Nursery
EPILAELIOCATTLEYA		
Heather Salzen	*Lc.* Rojo × *Epi. radicans*	Pradhan Orchid Lab.
GALEANDRA		
Raspberry Sherbet	*batemanii* × *devoniana* †	M. LeDoux
GOODALEARA		
Gold Rush	*Bllra.* Dancing Matador × *Onc. powellii*	Everglades
HAWKINSARA		
Solitary Man	*Hknsa.* Alice Iwanaga × *Slc.* Kauai Starbright	D. Neuendorff
KIRCHARA		
Tangelo	*Slc.* Shona × *Epi. vitellinum*	I. D. James
LAELIOCATONIA		
Jiara Scarlet	*Ctna.* Keith Roth × *Lc.* Memoria Sangah Chit	S. Mailamai

NAME	PARENTAGE	REGISTERED BY
LAELIOCATTLEYA		
Carolina Fire Imp	*Lc.* Spring Fires × *Lc.* Spring Imp	Lenette
Cayla Morgan Grezaffi	*C.* Louise Georgianna × *Lc.* Bonanza	J. Grezaffi
Fred's Red Lip	*Lc.* Park Ridge × *C.* Jacqueline Kennedy	F. J. Bergman
Pat's Lipstick	*Lc.* Log Cabin × *Lc.* Whitewings	F. J. Bergman
Raisaheb Bhimbahadur	*Lc.* Riva × *Lc.* Alisal	Pradhan Orchid Lab.
Sharon Shutty Wright	*Lc.* Betty Ford × *Lc.* Dorothy Fiene	Hausermann
MASDEVALLIA		
Goldie	*tonduzii* × Paradise Sunset	Dr B. C. Berliner
Peter Raven	*decumana* × *triangularis*	O. Neils
**MEECHAIARA (Mchr.)*		
Pearl of Siam	*Hgra.* Snow White × *Vasco.* Sumalee Beauty	Suphachadiwong
MILTONIA		
Canyon Fireworks	Melissa Baker × Redford	H. Liebman
Donald Feinstein	Dolores Hoyt × Edmonds	H. Liebman
Eastern Bay	Andy Easton × Le Nez Point	Mukoyama (Geyserland)
Rustic Red	Redford × Andy Easton	H. Liebman
Rustic Storm	Dolores Hoyt × Memoria Ida Seigel	H. Liebman
MILTONIDIUM		
Brazilian Gem	*Milt.* Seminole Blood × *Onc. crispum*	Everglades
NORTHENARA		
Alii Kahili	*Nrna.* Rebecca × *Lyon.* Virginia Rucker	R. Yahiro
ODONTIODA		
Blue Velvet	*Oda.* Memtor × *Odm. crispum*	Sunset (Mansell & Hatcher)
Dorabella	*Oda.* Margarete Holm × *Oda.* Red Marvel	Charlesworth Div. McBean's
Goldpark	*Oda.* Bo's Gold × *Odm.* Parkay	Sunset
Memoria Lionel Dunning	*Oda.* Bellcade × *Oda.* Robert Dugger	Strawberry Creek (R. Dugger)
Moment	*Oda.* Saint Clement × *Oda.* Mont a l'Abbe	Sunset
Nichirei Baian	*Oda.* Baiser × *Oda.* Pescoleyn	Nichirei Corp.
Nichirei Rouge	*Oda.* Baiser × *Oda.* Picasso	Nichirei Corp.
Pecan	*Oda.* Point Nepean × *Oda.* Culiacan	Sunset
Richbo	*Oda.* Bogotá × *Oda.* Castle Richard	Sunset
Rustic Creek	*Oda.* Shelley × *Oda.* Joe Marshall	H. Liebman
Rustic Firestorm	*Oda.* Chantos × *Oda.* Taw	H. Liebman
Rustic Glory	*Oda.* Robert Dugger × *Oda.* Wearside Galaxy	H. Liebman
Rustic Radiance	*Oda.* Shelley × *Oda.* Florence Stirling	H. Liebman
Tuolumne Meadows	*Oda.* Point Nepean × *Oda.* Alstir	Sunset
ODONTOCIDIUM		
Atlantic Crossing	*Onc.* Tai × *Odm.* Mont Sohier	Everglades
Golden Spots	*Onc.* Riverwood × *Odm.* Golden Glacier	Everglades
Tranquility	*Onc.* Tai × *Odm.* Goldmose	Everglades
ODONTOGLOSSUM		
Mount Shasta	Parade × Unalaska	Sunset
Tsurugaoka Gem	*crispum* × Hellemense	S. Komatsu (Mansell & Hatcher)
ODONTONIA		
Jungle Jog	*Milt.* Ka Moi × *Odm. cariniferum*	Everglades (George Black)
Tropical Heat Wave	*Milt. spectabilis* × *Odm.* Hyperry	Everglades (Robert Hamilton)
ONCIDIUM		
Eng Bee Lee	Dotty × *lanceanum*	Y. Alsagoff
Everglades Heat	Colon × *powellii*	Everglades
Feathered Dancer	Classy × *calochilum*	A. Aldrich
Fire Bird	Sammy Ray × Ame Lim	A. Aldrich
Hwang Fu	Noorah × Doctor Schragen	Y. Alsagoff
Inca	John Louis Shirrah × Mexico	Everglades
Lost Reef	Robsan × Baby Trouble	A. Aldrich
Moonstruck	Makalii × *macropetalum*	Gordon Heaps
Okeedokee	Ballet × Illustre	Everglades
Red Bird Reef	Little Bird Reef × Red Fury	A. Aldrich
Rustic Sunset	*macranthum* × *serratum*	H. Liebman
Rustic Surprise	*maculatum* × *serratum*	H. Liebman
Yu Hui Cheng	Penang Batik × Siskadomo	Y. Alsagoff
ORCHISERAPIAS		
Southern Cross	*Srps. neglecta* † × *Orchis coriophora* †	G. Nieuwenhoven

NAME	PARENTAGE	REGISTERED BY
OTAARA		
Sand Dune	*Otr.* Hawaiian Queen × *Blc.* Erin Kobayashi	D. Neuendorff
Shirley Ehlert	*Otr.* Krull-Smith × *C. aclandiae*	Marianne Matthews (Riverbend)
PAPHIOPEDILUM		
Afternoon Shadows	Sweet Sunrise × Gaystone	Ratcliffe
Amanda Check	Matcheck × Tree of Amanda	Mukoyama (M. Kimura)
Anastasia	Emerald × Oriental Venus	A. Mochizuki
Avalanche	Silvara × Shareba	Ratcliffe
Beautiful Fleck	Sea Cliff × Jolly Green Gem	Mukoyama (M. Kimura)
Bertha Shirley	Maudiae × Petula	A. Mochizuki
Bestseller	Wild Wood × World Famous	Ratcliffe
Blewett Pass	Memoria Helene Colbert × *callosum*	Baker & Chantry
Bucolic Day	Overraeus × Lambert Day	Mukoyama
Claret Amanda	Tree of Amanda × Claret Tree	Saeki Nurs. (M. Kimura)
Consolation	Olivia × Dusty Miller	Ratcliffe
Crow's Treasure	James Crow × Vintner's Treasure	Mukoyama (M. Kimura)
Dark Forest	*hirsutissimum* × Ceres	L. Wish (N. Powell)
Diffusion	Sweet Harmony × Danella	Ratcliffe
Doctor Toot	*kolopakingii* × *delenatii*	Tim Anderson (R. J. Rands)
Dragon Mak	Auroreum × Makuli	A. Mochizuki
Elysian Snow	Olenus × *niveum*	Marriott Orchids
Emily Shafarman	Spotter × Makuli	S. R. Weltz
Fairiphips	Phips × *fairrieanum*	Mukoyama
Flight Jack	Flight Path × Uncle Jack	Saeki Nurs. (M. Kimura)
Gekko	San Francisco × Yumedono	A. Mochizuki
Grand Poense	Grandmoor × *malipoense*	Mukoyama (M. Kimura)
Green Freckle	Freckles × Jolly Green Gem	Mukoyama (M. Kimura)
Green Verde	Via Rio Verde × Jolly Green Gem	Mukoyama
Hamana Heaven	Santee × Richardson	Saeki Nurs.
Hamana Passden	Hamana Holden × Hamana Passion	Saeki Nurs.
Helen Eickhoff	Supersuk × Nulight	D. Eickhoff (A. Klehm)
Herbert Bartle	*chamberlainianum* × Golden Diana	S. B. Carter (H. Bartle)
Hercules Poirot	*lowii* × *hirsutissimum*	L. Wish (R. J. Rands)
Honour Bound	Denehurst × Miller's Daughter	Ratcliffe
Inca Moon	Peter Black × Lunadean	A. Svoboda
Indian Vale	Original Sioux × Valediction	Mukoyama
Khai Carillon	Carimo × Winston Churchill	Mukoyama
Kilverland	Troyland × Kilverstone	Ratcliffe
Kimura Festival	Spotter × Treevill Festival	Mukoyama (M. Kimura)
Kimura Peal	Frank Pearce × Motoo Kimura	Mukoyama (M. Kimura)
Kimura's Tree	Winston Churchill × Lovely Tree	Mukoyama (M. Kimura)
Kimura Wind	Tree of Wendover × Nigel Calder	Mukoyama (M. Kimura)
Kylanne's Clown	Utgard × *spicerianum*	Wes Harris (O/U)
La Rocque	Lebaudyanum × *rothschildianum*	E. Young O.F.
Light Up Ahead	Simonburn × *stonei*	L. Wish (N. Powell)
Malipo Flight	Pacific Flight × *malipoense*	Mukoyama (M. Kimura)
Margaret Whitmire	*niveum* × *hookerae*	T. Ott (Fox Valley)
Mary Poppins	Utgard × *niveum*	A. Mochizuki
Memorial Paterson	Robert Paterson × Memoria Doctor Tsuchiya	Mukoyama
Memoria Tony Dalton	Troyland × Personality	Ratcliffe
Milton	Greenshank × Tangold	F. R. Haynes
Moonfest	White Knight × Bushey	Marriott Orchids
Moonraker	Miss World × Nobuko	Ratcliffe
Moor Gale	Renegade × Milmoore	Mukoyama (M. Kimura)
New Springs	New World × World Spa	Ratcliffe
Olympian Yard	Lovely Yard × Olympian Paradise	Mukoyama
Optimist	Orchilla × Mildred Hunter	Ratcliffe
Orewa	Verde Oro × *hirsutissimum*	C. Collis (Geyersland)
Overlook Blanch	Overraeus × Blanche Sawyer	Mukoyama
Overlooking Buena	Overraeus × Yerba Buena	Mukoyama
Overlooking Cadenza	Overraeus × Caddiana	Mukoyama
Overtake	Overraeus × Over the Mountain	Mukoyama
Parwich	*sukhakulii* × Song-bird	F. H. Haynes
Pauline Weltz	Memoria Samuel Weltz × *spicerianum*	S. R. Weltz
Pavone	British Bulldog × Liberty Lord	Ratcliffe
Psychout	Amanda × Psyche	Marriott Orchids
Queen Bee	Beedon × Danaqueen	F. R. Haynes
Red Malaguena	Malaguena Paradise × Winston Churchill	Mukoyama
Red Memory	Pawnee × Winston Churchill	Mukoyama
Reigning Queen	*niveum* × Lady Luck	Marriott Orchids
Revival	Mandy-Lu × Personality	Ratcliffe
Robert's Present	Lovely Present × Robert Paterson	Mukoyama
Royal Smile	Ernest Read × *appletonianum*	A. Mochizuki

NAME	PARENTAGE	REGISTERED BY
PAPHIOPEDILUM continued		
Shirley	Vital Venture × Patricia Haynes	F. R. Haynes
Simon Says	Ernest Read × *violascens*	A. Mochizuki
Singer's Treasure	Love Song × Vintner's Treasure	Mukoyama
Snowmoor	Whitemoor × Snowbird	Marriott Orchids
Star Parade	Montagnard × Maudiae	A. Mochizuki
Strath Roth	Strathacre × *rothschildianum*	Mukoyama
Strath Yard	Strathacre × Lovely Yard	Mukoyama
Sunland Summer	Sunland × King of Sweden	Mukoyama (M. Kimura)
Sunlit Glade	Nordene × Sarella	Ratcliffe
Tall Story	New Edition × Wild Wood	Ratcliffe
Tetris	Gowdon × Memoria Robert Ward	A. Mochizuki
Translucent	Silvara × *tonsum*	Ratcliffe
Travelling Light	Plumella × Radiant Tiger	Ratcliffe
Valor Sioux	Valwin × Original Sioux	Mukoyama
Vocalist	Coloratura × Blondel	Ratcliffe
Watercress Line	Brownstone × British Bulldog	Ratcliffe
Wes' Belrosi	Delrosi × *bellatulum*	Wes Harris (O/U)
White Albion	Albion × *niveum*	Mukoyama
White Betty	Silvara × Betty Bracey	Mukoyama
Willie McGee	Joanne's Wine × *callosum*	A. Mochizuki
Winning Kimura	Motoo Kimura × Winlantis	Mukoyama (M. Kimura)
Woodwind	Cadence × Wild Wood	Ratcliffe
PHALAENOPSIS		
Almaviva	Micro Nova × Zauberstripe	H. Wallbrunn
Beatriz Algarra Ford	Patricia Neal × Edie Wasserman	Zuma Canyon
Beginner's Show	Show Boat × Beginner's Champ	J. Stubbings (Hausermann)
Bodine	Copa de Oro × Deventeriana	P. van Adrichem
Brant Filip	Margit Moses × Laura Froeschle	J. R. Moses
Byte Size	Orchidview Angel × Riverbend Elfin Frost	H. P. Norton
Camp Bells	Julia Wilson × Golden Bells	H. P. Norton
Carolina Blushing Beauty	Yolanda Josefa Wever × Ida Fukumura	Lenette
Carolina Fire Light	Carolina Red Spica × Arthur Zeller	Lenette
Carolina Little Cherub	Golden Eagle × *lindenii*	Lenette
Carolina Red Aileen	Aileen Stoops × *venosa*	Lenette
Carolina Spring Beauty	Ida Fukumura × *philippinense*	Lenette
Carolina Spring Sunrise	Buddha's Gem × Miami Sunrise	Lenette
Cat's Paw Cream	Taipei Gold × Crystal Veil	D. & C. Plahn (O/U)
Cat's Paw Hotlips	Bill Zauber × Bradley's Lily Mae	D. & C. Plahn
Cat's Paw Tigerling	Brazilian Queen × Bamboo Baby	D. & C. Plahn
Childline Caritas	Sussex Cloud × Sussex Pearl	McBean's
Cosmo-America	America Tour × Ida Fukumura	Kokusai
Cosmo-Spitz	Carmela's Wonder × Spitzberg	Kokusai
Cosmo-Toris	America Tour × *equestris*	Kokusai
Crown Prince Christy	Christy's Hot Spot × Crown Prince	J. Stubbings
Daemmerung	*gigantea* × Nancy Mason	H. Wallbrunn
Dale Krazit	Platinum Plus × Perfect Harmony	Hausermann
Dale Noll	Walter Bettencourt × Kathryn Saltzman	Bettencourt
Dare Devil	Ai Gold × Red Devil	H. P. Norton
Deborah Menigoz	Christy's Hot Spot × Country Charm	J. Stubbings
Diana Baby	Diana Plahn × Bamboo Baby	D. & C. Plahn
Elysium	Deventeriana × Bon Bon	H. Wallbrunn
Exotic Pink Spots	Hawaiian Stripe × Carmela's Spots	Blietz-Wailea
Frozen Smile	Frozen Waterfall × Smile Maker	J. Stubbings (Hausermann)
Galactic Frost	Misty Green × Planet Whiteout	Gordon Heaps
Gemstone's First Pink	Soroa Ballad × Pink Festival	Gemstone
Grand Strand	Golden Buddha × Neon Stripes	H. P. Norton
Green Canyon's Jessica	Hausermann's Candy × Exotic Network	P. Croezen
Hannelore VonderLippe	Career Garnet × Donna Sitton	Breckingridge
Honey Glazed	Cinnamon Sugar × Hausermann's Goldcup	H. P. Norton
Isle of Platinum	Isle of Dreams × Platinum Plus	J. Stubbings (Hausermann)
Jaune Plume	Ambomanniana × Misty Green	F. J. Bergman
Kant Bee Dunn	Palm Coast × Phantom Blush	C. Hackney
Katie Lu	Velvet Kiss × Enchanting Blush	Hausermann
Kimberley's Daze	Butterball × Rosa Niebla	Colourfull Nurs.
King's Gem	Jim Krull × King's Ransom	H. P. Norton
King's Way	King's Ransom × Golden Daybreak	H. P. Norton
Kundry	Elayne × Chamonix	H. Wallbrunn
Leggiero	*gigantea* × Elayne	H. Wallbrunn
Little Linda	Vilind × *lindenii*	Lenette
Minglee Coral Stripes	Auspice Red Coral × Auspice Taipei Stripes	Funcherng Lin
Minglee Green Yellow	Bamboo Nancy × Winter Kaala	Funcherng Lin
Minglee Pink Stripes	Auspice Taipei Stripes × Auspice Taipei Pink	Funcherng Lin
Minglee Ruby	Paifang's Queen × Luedde-Violacea	Funcherng Lin

NAME	PARENTAGE	REGISTERED BY
PHALAENOPSIS continued		
Minglee Taipei Pink	Pinlong Davis × Auspice Taipei Pink	Funcherng Lin
Minglee Taipei Spots	Paifang's Queen × Bamboo Nancy	Funcherng Lin
Minho Gold	Misty Auckland × Taipei Gold	Min-Ho
Minho Lit-Rose	Matou Rose × *equestris*	Min-Ho
Minho Queen	Paifang's Auckland × Ambonosa	Min-Ho
Minho Spots	David Lim × Super Stupid	Min-Ho
Misty Auckland	Paifang's Auckland × Misty Green	Min-Ho
Monet's Garden	Goldiana × Rich's Pride	Colourfull Nurs.
Mystik Carib Sunrise	Suziana Wijanto × Taipei Gold	T. Neely
Mystik Gren Poupon	Brother Nugget × Gladys Read	Neely & Bergstrom (O/U)
Mystik Illusion	Ginger Candy × *viridis*	Neely & Bergstrom (O/U)
Mystik Shamrock	Mystik Illusion × Jade	Neely & Bergstrom (O/U)
Olympia's Golden Cream	*amabilis* × Venolis	W. Tippit
Olympia's Golden Ember	Miniflash × *venosa*	W. Tippit
Olympia's Tapestry	Ai Gold × Snow Leopard	W. Tippit
Olympia's Texas Sun	Yellow Lightning × Taipei Gold	W. Tippet
Parnassus	Micro Nova × Miva Smartissimo	H. Wallbrunn
Passione Giallo	Brother Buddha × Gladys Read	Manor Hill (O/U)
Planet Whiteout	Spitzberg × Keith Shaffer	Gordon Heaps (O/U)
Regal Bells	Golden Bells × King's Ransom	H. P. Norton
Rochelle Hicks	Via Red Knight × Hausermann's Cheri	John E. Wilson (Gallup/Stribling Int.)
Rosalynn Carter	Soroa Barcarolle × Pink Festival	Gemstone
Sea Dreams	Sea Breeze × Isle of Dreams	J. Stubbings (Hausermann)
Shenanigan	Pimlico Sunshine × *equestris*	H. P. Norton
Sogo Beer	Queen Spot × Ta Lin Kaiulani	Sogo
Sogo Dancer	Misty Green × Taipei Gold	Sogo
Sogo Glamour	Brother Peak × Yungho Princess Gelb	Sogo
Sogo Grape	Super Stupid × Princess Kaiulani	Sogo
Sogo Green Gelb	Misty Green × Gelblieber	Sogo
Sogo Holiday	Auckland Buddha × Princess Kaiulani	Sogo
Sogo Hollywood	Black Eagle × Yungho Princess Gelb	Sogo
Sogo Kingdom	Black Beauty × Yungho Princess Gelb	Sogo
Sogo Light	Super Stupid × Coral Isles	Sogo
Sogo Lit-Girl	Be Glad × Sogo Lit-Angel	Sogo
Sogo Peak	Brother Peak × Super Stupid	Sogo
Sogo Yew	Super Stupid × Fortune Buddha	Sogo
Strawberry Kitten	Fortune Buddha × *equestris*	D. & C. Plahn (O/U)
Su-Hui Lee	Deventeriana × Jill St John	Jar-How Lee
Super Pixie	Carmela's Pixie × Zuma's Pixie	Nan Kung
Super Seven	Little Steve × Carmela's Pixie	Nan Kung
Super Tercel	Carmela's Pixie × Cassandra Pixie	Nan Kung
Sweet Mystery	Golden Bells × Super Stupid	H. P. Norton
Ta Lin Kaiulani	Coral Nosa × Princess Kaiulani	Sogo
Vanessa Martin	Asean × *denevei*	David Lim
Via Red Knight	George Vasquez × Zuma's Royal Stripe	John E. Wilson (Gallup/Stribling Int.)
Via Southcoast Gladder	Be Glad × Petite Rose	South Coast (Gallup & Stribling)
Via Southcoast Goldiana	Goldberry × Deventeriana	South Coast (Gallup & Stribling)
Zauberstripe	Zaubergloria × Midstripe	H. Wallbrunn (L. Poole)
POTINARA		
Cosmo-Dawn	*Blc.* Wakamodosa × *Sc.* Beaufort	Kokusai
Fred's Orange Sorbet	*Sc.* Helen Veliz × *B.* Aristocrat	F. J. Bergman
Fred's Salmon	*C.* Angelwalker × *Pot.* Sailers Delight	F. J. Bergman
Golden Pumelo	*Blc.* Makaha Gold × *Slc.* Golden Wax	Orchis Flor.
Jane LaFour	*Pot.* Tapestry Peak × *Blc.* Golden Sands	Lenette (A. L. LaFour)
Jiara Rapture	*Blc.* Lucky Strike × *Slc.* Empress of Mercury	S. Mailamai
Miya's Passion	*Lc.* Royal Emperor × *Pot.* Sally Taylor	Miyamoto
Reids Discovery	*Pot.* Aloha Mishima × *Lc.* Susan Holguin	Aloha Orchids
SOPHROLAELIOCATTLEYA		
Fred's Lemon Drop	*Slc.* Lisbon Lace × *Lc.* Trick or Treat	F. J. Bergman
Fred's Red	*Slc.* Dixie Jewels × *L. ostermayeri*	F. J. Bergman
Icon	*Slc.* Kea × *Slc.* Memoria Dorothy Worden	I. D. James
Medley	*L. briegeri* × *Slc.* Minx	I. D. James
THELYMITRA		
Cinderella	*rubra* × *variegata* †	H. Beyrle
Queen Adelaide	*antennifera* × *aristata* †	H. Beyrle
**TRIASPETALUM (Tspt.)*		
Meechai	*Trias disciflora* × *Cirr.* Elizabeth Ann	Suphachadiwong
**TRIASPHYLLUM (Tphm.)*		
Prasong	*Bulb. lobbii* × *Trias vitrina* †	Suphachadiwong

NAME	PARENTAGE	REGISTERED BY
VANDA		
Crownfox	Fuchs Fuchsia × Fuchs Delight	R. F. Orchids
Nora Dyke	Annette Jones × Faye Bennett	R. F. Orchids
Zin Ni	Petamboeran × Eisensander	Y. Alsagoff
VASCOSTYLIS		
Robert Hague	*V.* Thanantess × *Vasco.* Five Friendships	R. F. Orchids
WILSONARA		
Morton Weitz	*Wils.* Zoe Stephenson × *Oda.* Taw	H. Liebman
Nichirei Purlac	*Odcdm.* Purbeck Gold × *Oda.* Lilac Wood	Nichirei Corp.
Nightingale	*Wils.* Bubba Mock × *Onc. powellii*	Everglades
On Golden Pond	*Onc.* Francisco Pons × *Oda.* Bo's Gold	Everglades
YAMADARA		
Cariad's Cadmium	*Blc.* Cadmium Light × *Epi. mariae*	Marianne Matthews
ZYGOCOLAX		
Betsy Crowell	*Zcx.* Judith Phillips × *Z.* Alexis Linder	Hoosier (Great Lakes)

*New intergeneric name with abbreviation for the following combination. The botanical authority follows each component genus.
Meechaiara (named in honour of Luke Meechai of Thailand) = *Ascocentrum* Schlechter × *Doritis* Lindley × *Phalaenopsis* Blume × *Rhynchostylis* Blume × *Vanda* Jones ex R. Brown
Triaspetalum = *Cirrhopetalum* Lindley × *Trias* Lindley
Triasphyllum = *Bulbophyllum* Thouars × *Trias* Lindley

†Species appearing for the first time as parents in registration:
Bulbophyllum capillipes; Diuris venosa; Galeandra devoniana; Orchis coriophora; Serapias neglecta; Thelymitra aristata; Thelymitra variegata; Trias vitrina

CORRIGENDA – Orchid Review list of:
September/October 1995, *Rnthps.* Kay Redfern: change to Kaye Redfern
January/February 1996, *Paph.* Marry Japan: change to Mary Japan
January/February 1996, *Pot.* Hizagawa Ruby Tokuzato: change to Hijagawa Ruby Tokuzato

CORRIGENDUM – Sander's List of Orchid Hybrids 1986–1990
p.347, *Lc.* Simone Kim-Kuc Bauer: should read Simone Kim-Cuc Bauer

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Notes on the Orchids of New Guinea and the Pacific

by Paul Ormerod

Part 3

Platylepis A.Rich.

This genus has a curious pattern of distribution, for it occurs in Africa and Madagascar then in the Moluccas out to Tahiti. Recent authors have preferred to use the name *Moerenhoutia* Bl. for the plants in the Malesian area. But I have been unable to find any significant distinctions between the two geographic groups.

Platylepis is closely related to *Goodyera* R.Br. and is distinguished from the latter by the slender column and pandurate (violin-shaped) labellum which has its internal callosities limited to each side at the base.

Platylepis constricta (J.J.Sm.) J.J.Sm., Fedde Rep. 11:554, 1913. Basionym: *Goodyera constricta* J.J.Sm., Bull. Dep. Agr. Ind. Neerl. 39:16, 1910. Syn.: *Moerenhoutia constricta* (J.J.Sm.) Schltr., Engl. Bot. Jahrb. 56:450, 1921.

Types: Dutch New Guinea. Noord Rv., 10-1909, von Roemer 687 (syn.: BO n.v.); near Alkmaar, Lorentz exped. 1909, cult. hort. Bog. no. 246R ex Rachmat s.n. (syn.: BO n.v.).

Platylepis lamellata Schltr., Fedde Rep., Beih. 1:53, 1911; *Moerenhoutia lamellata* (Schltr.) Schltr., Engl. Bot. Jahrb. 56:450, 1921.

Type: Papua New Guinea. Finisterre Ra., 1000m, 07-1908, Schlechter 18028 (holo.: B — destroyed; iso.: K, NSW; E, L n.v.).

Distribution: New Guinea; Bougainville and Solomon Islands.

Occurrence: Papua New Guinea. Bougainville, Pavairi, 855m, Ridsdale & Lavarack NGF 30578 (K).

Solomon Islands. Rendova, track from Ughele Village to Rendova Peak, 420m, 10-09-1991, Lewis 7 (K).

Notes: Thorne & Cribb (1984) list *Platylepis* from Bougainville (based on NGF 30676 n.v.) and later other material was studied at Kew. So perhaps it is by oversight that the genus isn't mentioned in the account of Lewis & Cribb (1991). The plant externally resembles a large *Goodyera viridiflora* (Bl.) Bl. The flowers in the Rendova specimen had green sepals with creamy white petals and labellum.

Due to technical errors some data has been accidentally deleted from the previous instalments of this article. In part 1 under *Erythrodes parvula* Kores after **Occurrence:** add "Vanautu. Vanua Lava, Vatrata Village, 390-410m, Wheatley 347 (K)."

In part 2 under *Glomera* Blume, a new record for *G. bougainvilleana* Ormd. was deleted and also the name, type, synonym, Latin diagnosis and the description of *G. distichifolia* Ormd. This information is added below; distribution, occurrence and notes on *G. distichifolia* can be found under *Glomera* Blume in part 2 and is not repeated here.

Glomera bougainvilleana Ormd., Austral. Orch. Rev. 60, 2:37, fig., 1995.

Type: Papua New Guinea. Bougainville, Maide River Gorge, 610m, 15-08-1964 Schodde & Craven 3834 (holo: LAE; iso: BRI, K; AMES, BO, CANB, G, L, PNH, US n.v.).

Distribution: Bougainville and Solomon Islands.

Occurrence: Solomon Islands. Guadalcanal, Mt Gallego, 915m, 7-07-1965, Dennis RSS 2030 (K).

Notes: The above collection is a new record for the Solomon Islands, it was found among specimens named *G. montana* Rchb.f.

Glomera distichifolia Ormd., sp. nov.

Typus: Solomon Islands. Guadalcanal, Mt. Popamanatseu, 2135m, 29-10-1965, Hunt RSS 2961 (holo: K).

Syn.: *Glomera papuana* auct non Rolfe: Lewis & Cribb 1989:92, fig. 15 L-U; 1991:150, fig. 34 L-U.

Species nova affine G. patens Schltr. sed folia lanceolata et 3-8mm lata (non ovato-lanceolata, 10-14mm lata).

Epiphyte. Stems slender, sparsely branching, laxly-subdensely folioise, 10-40cm long x 0.1-0.2cm thick. Leaf sheaths concealing stem, verrucose, truncate at apex opposite leaf base. Leaves patent, lanceolate, inequally subacutely bilobed, coriaceous, 1.7-4.5cm long x 0.3-0.9cm broad. Inflorescence terminal, globose, many-flowered, 1-2cm diam., subtended by foliaceous sheaths. Flowers white, labellum apex rose, anther cap maroon. Dorsal sepal oblong, obtuse, 9-10mm long x 4mm broad. Lateral sepals ovate-oblong, subacute, connate in the basal half and enclosing the spur, 10mm long x 4.5mm broad. Petals narrowly elliptic, obtuse, 8mm long x 3.5mm broad. labellum epichile subquadrate, obtuse, 2-2.5mm long x 3-3.5mm broad; spur oblongoidal, obtuse, 2.5-3mm long x 1.5-2mm diam. Column incurved, 2-2.5mm long, each side with a quadrate apically denticulate wing.

Thrixspermum Lour.

A genus of more than 100 species distributed from Sri Lanka to Samoa. Flowers are usually ephemeral (ie lasting hardly a day) and produced in succession, often spasmodically due to their reliance on certain atmospheric stimuli.

Thrixspermum warianum Schltr., Fedde Rep., Beih. 1:961, 1913.

Type: Papua New Guinea. Maboro Ra., Waria area, 900m, 05-1909, Schlechter 19498 (holo.: B — destroyed).

Syn.: *Thrixspermum platystachys* auct. non (Bailey) Schltr.: Lewis & Cribb 1991:272, f.72, Pl.16E.

Distribution: Papua New Guinea and Solomon Islands.

Occurrence: Solomon Islands. New Georgia: Abu Village, Maroro Lagoon, 5-10-1986, Wickison 63A (K). Gaudalcanal: Vuanimamo Rv., 650m, 16-05-1987, Wickison 63B (K).

Notes: The excellent figure and photograph called *T. platystachys* by Lewis & Cribb (1991) certainly belong to *T. warianum* which can be distinguished by its broader tepals and backward directed labellum sac (in *T. platystachys* the tepals are linear and the labellum sac forms a right angle with the ovary). The other collections listed by Lewis & Cribb appear correctly attributed to *T. platystachys*.

Thrixspermum williamsianum (Kores) Ormd., comb. nov.

Basionym: *Sarcochilus williamsianus* Kores, Allertonia 5, 1:187, 1989.

Type: Fiji. Viti Levu, Rewa Prov., "Suva", 29-07-1954, Simmonds s.n. (Holo.: K).

Distribution: Fiji.

Occurrence: Fiji. Viti Levu: 10-01-1921, Greenwood 191 (K); 11-12-1921, Greenwood 191 (K); Im Thurn 308 (K); Vaughan 3195, 3308 (K).

Notes: For further collections and details see Kores (1989; 1991). Kores argued that his new *Sarcochilus* did not belong in *Thrixspermum* because its labellum was articulate with the columnfoot and was filled with a large (not small) transverse frontwall callus. It is clear however that Kores was not familiar with the diversity of these floral structures in

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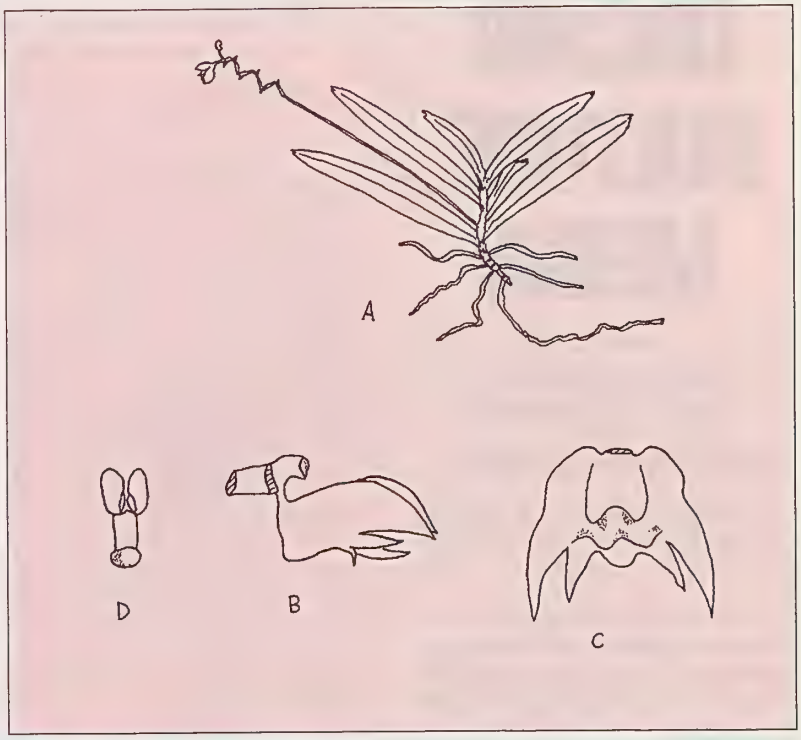
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Thrixspermum. His new taxon possesses the habit, inflorescence, flowering habit (ephemeral, successive flowers), labellum structure and pollinium of *Thrixspermum* (sect. *Thrixspermum*).

A large transverse frontwall callus occurs for example in *T. loogemanianum* Schltr. and the degree of labellum articulation/immovability with the columnfoot varies considerably with the different taxa.

Acknowledgements

I wish to thank Phil Cribb and Jeff Wood at Kew for assisting in various ways. J.J. Vermeulen (L) for sending a photocopy of the type of *Goodyera waitziana* Bl. and the herbarium and library staff at BM, BRI, K, LAE, MEL, NSW and QRS.



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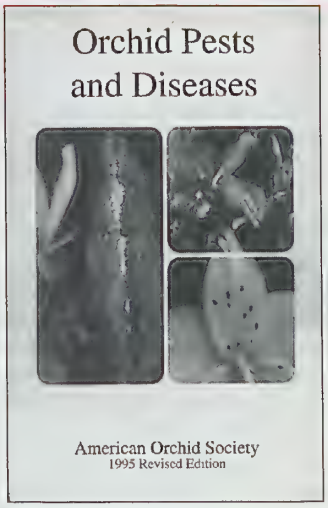
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Paul Ormond
P.O. Box 8210
Cairns, Qld 4870

BOOK REVIEW

Orchid Pests and Diseases
Prepared by the American Orchid Society
1995 Revised Edition
118 pages, Soft cover
Colour and B&W
RRP US$12 plus postage and handling
Orders through the American Orchid Society, Book Department, 6000 South Olive Avenue, West Palm Beach, Florida. 33405 USA



An update of the popular 1991 edition, this book has been written to make it easy for amateur and commercial growers everywhere to identify insects and other pests and diseases that may harm their orchids, along with suggested cures and treatments.

Each chapter is well illustrated with both colour and black and white photographs (over 100 in all) showing a greater range of insects and diseases than ever before.

The text is well written in non-technical language by leading authorities, and although obviously aimed at the American market, the use of scientific names for insects, mites, fungi and bacteria ensures that the book has universal appeal. Similarly, while not all of the substances used for pest control have universal names, the use of chemical names throughout the book makes identification of the substances in Australia relatively easy.

Orchid Pests and Diseases is an extremely useful reference book which deserves a place in every orchid lover's bookshelf.

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AOR 045

Fifty-five Years Ago

As we would expect, much of the A.O.R. of 1941 was devoted to orchid culture in many of its different aspects. Percy Gilbert led the way with two editorials, one extolling "patience in orchid culture" and the other setting out the evils of "overstocking the orchid house". The editor urged patience in dealing with pests, in the use of manures, in the cultivation of back-bulbs or back-cuts, in the introduction to the collection of new orchids and "in all things appertaining to the cultivation of orchids". In the overstocked house he points out that it is difficult to water efficiently, that mediocre light and aeration develop, and insects and other pests thrive.

A further contribution from Gilbert was another instalment of "A Cultural Calendar" for the autumn months, which not unnaturally was devoted to the district around Sydney, and contained hints on watering, hardening off, making the most of available sunlight, and guarding against the hazards of sudden temperature drop.

T.H. James continued his cool house culture series with commentaries for autumn, winter and spring, in which he gives details of the management of his collection and his problems, failures and successes. While growers of today may not unequivocally acept all his propositions, it is interesting, and in a way comforting, to realise that our antecedents of fifty-five years ago were often in the same straits as we find ourselves, facing essentially the same tasks, difficulties, concerns and dilemmas. To bring home this point I need mention only some of his topics, namely watering, light control, flower induction, air movement and vegetable division. Some things have changed, nevertheless, for example the provision of shade by means of plastic cloth. In the glasshouse this has superseded "Mill White" paint on scrim blinds, and in the bush-house now replaces laths or tea-tree.

Peat is a word often used to refer to a component of various orchid composts or growing media, primarily used to retain moisture. An explanatory report by F. Douglas settled some of the confusion surrounding the word. Peat is formed in bogs from decayed vegetable material, and when dug out and allowed to dry serves as a domestic fuel in some higher latitudes. On a recent trip to the Falkland Islands I saw it being dug for this purpose. The "peat" that we use for horticultural purposes is material in a less advanced state of decomposition, which when dried out resembles a moss and is more correctly known as "peat moss". The "peat" sometimes written of by overseas orchid growers often refers to material obtained from the surface layer of moors, composed of roots of grass, bracken, heather etc. Various fern fibres have been referred to as peat in Australia, e.g. polypodium peat (from Drynaria spp.), staghorn peat or elkhorn peat.

An array of individual articles described growers' experiences with various orchids in the districts of Sydney, Newcastle and Brisbane. The list of genera discussed in these accounts is quite impressive, as follows:–

New South Wales: *Calanthe, Cattleya, Coelogyne, Dendrobium, Lycaste, Miltonia, Oncidium, Paphiopedilum, Phaius, Phalaenopsis, Thunia, Vanda and Zygopetalum;*

Queensland: *Cattleya, Coelogyne, Cymbidium, Dendrobium, Paphiopedilum, Pleione, Stanhopea, Trichopilia* and *Vanda.*

A note from Dr. Jaede reported that ants were spreading a damaging fungus on both soft-cane and hard-cane dendrobes. This serves as a reminder to us to eliminate these pests whenever possible.

Len Lawler
P.O. Box 58, Atherton 4883

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AOR 013

A Bit About *Dendrobium pugioniforme*

by Gerry Walsh

The first native orchid I ever remember seeing in the bush was *Dendrobium speciosum*. One of the best places on my old childhood 'farm home' to see those funny rock lily things was up in the corner of a paddock which backed onto a piece of uncleared bush known as "Glennins" bush. Up yonder, there is a big rocky outcrop at the brink of a small waterfall with a trickle of sweet water showering off the edge – a natural spot to sit down and scoff your lunch and have a cool, cool drink. And yes ... the three metre wide clump of rock lilies at your feet is now known far and wide as *D. speciosum* 'Glennins' AM/QOS/AOC.

In September 1975, while squeezing between big boulders and stepping over pools of water to get a closer look at that grand clump, my nostrils were assaulted by an incredibly sweet, almost overpowering aroma. Four inches from the tip of my nose, so close that I had to snap my head backwards in order to focus my eyes properly, was this funny looking green flower about two cms across. The purple speckles and stripes on its white centre were especially impressive. But the perfume was the thing that grabbed me on that warmer than usual Spring morning.

I wiped my hand through the curtain of pointy green leaves and wire-like stems that crowded the rock face. And of course, I quickly proved what I later ascertained from a book by W.H. Nicholls, that this funny prickly plant was an orchid with perhaps the most apt name in the family *Orchidaceae;* the 'Dagger Orchid' ... *Dendrobium pugioniforme*. A couple of little pin prick wounds began to seep globules of blood. But this was quickly ignored as I took another, and another, deep snort from that magical little flower. That perfume was absolutely captivating! As I crab-walked my way along that ledge I found dozens more flowers. My senses were becoming befuddled by that wonderful, heady perfume. It was as if I was in a dream ... the stinking old rock lilies would have to wait ...

Such was my first experience with one of the most common species of Australian *Dendrobium*. Neglected would be the most suitable adjective I could use to describe the attitude most native orchid growers have adopted towards poor old *D. pugioniforme*. Until last September this was certainly my attitude to it. At that time I was rock hopping up a beautiful rainforest creek down in the Shoalhaven district – a creek I've hopped about in most of my life. I have always been aware that there were lots of *D. pugioniforme* adorning the trees and small cliffs that channel this leaping little stream on its charge down to the valley floor. And on this particular morning it was all flowering beautifully. I, of course, was checking out all the plants I could reach without straying too much from my task at hand – it was speciosum season you see.



Drawings by D.L. JonesNative Orchids of Australia

As the hours ticked away I became more and more admiring of *D. pugioniforme* as a species. So many times over the years I had totally ignored it in my rush to study the more glamorous native orchids. But a chance funding of a truly superb clone of Dagger Orchid made me sit up and rethink this rather stupid attitude. I removed a small piece from this beautiful clone to take home with me. I wrote on the tag: "Vivid green and vivid purple". That sums up the special attributes of this plant – a very striking clone indeed and one that most growers would be overjoyed to own a piece of. It struck me that I must have walked right past this ripper at least fifty times over my orchiding life, maybe more, and generally at this exact time of the year. It must have been flowering during nearly all those walks.

Before this clone came to my bushhouse, there was only a single plant of *D. pugioniforme* in my collection, an old specimen from my first efforts at growing native orchids. I'd often brought back rescued plants from smashed trees and given them to whoever wanted them, mostly non-orchid people like old aunts and next door neighbours. I could mount up the pieces quickly and easily and give them away knowing that only a horticulturally-bankrupt person could actually kill them. "You just have to water them all the time" I'd tell them. (Even the real hard cases among those recipients still have them alive, I think).

D. pugioniforme is distributed from Mt Dromedary near Tilba Tilba, south coast of NSW, up to the Bunya Bunya Mountains in the north (southern Queensland). Mt Dromedary, for the buffs of useless trivia amongst us (and who isn't?), is the largest free-standing mountain in coastal NSW (as opposed to a mountain that's part of a range). It was named by Capt. Jimmy Cook for its similarity to the shape of a camel's back. It rises to 2,600 feet above the ocean, which literally sits at Dromedary's feet. I haven't actually been on top of this mountain, despite having spent many a holiday at the nearby hamlet of Bermagui. People who have been up there tell me the view is magnificent and that cool rainforest and big boulders and towering treeferns are the major components of the habitat.

And that description just about sums up the kind of environment that *D. pugioniforme* really goes for. Places like Cambewarra Mountain, Mount Wilson, Mount Warrawalong, Barrington Tops, Comboyne, Dorrigo, Border Ranges, and finally Bunya Bunya. And a thousand places in between. They all share those Mt Dromedary components. And it certainly

isn't coincidence that they virtually all have those same, rich volcanic geological origins. *D. pugioniforme* isn't restricted the red-soil wonderlands of course, but these are certainly its major strongholds.

Anywhere you find a rainforest gully at reasonable altitudes, you could very well run into the Dagger Orchid. But it doesn't seem to go for the millions of promising gullies that criss-cross the huge sandstone areas between the Hunter River and the Illawarra. Such gullies are often crowded with orchids of many kinds. But unless there is a volcanic connection quite nearby, *D. pugioniforme* will ***ALMOST*** certainly be absent ... even if good *Backhousia* (Myrtle) dominated rainforest lines those gullies. This peculiarity becomes less obvious the further northwards one travels. At the extremes of altitude, up to 1200 metres, *D. pugioniforme* will still be hanging in there. In the high Antarctic Beech forests, it is usually very abundant where nearly all other species except for *D. falcorostrum* and *Sarcochilus falcatus* have chickened out. Cool temperate rainforests dominated by Coachwood are often loaded with *D. pugioniforme* and *S. falcatus*, but very little else.

Wherever you find *D. pugioniforme,* two constants are usually detectable. Firstly, there will certainly be a lot of it around the area you are tramping through. Secondly, there will nearly always be gardens of moss carpeting the trees and rocks in the locality. These two points are not necessarily gospel however. And with a species that is as abundant as *D. pugioniforme* is, there are always going to be exceptions to the gospel.

I've been trying to think of another temperate native orchid that so frequently colonises both rocks and trees with the same degree of equalness. I couldn't state for certain that it is more likely to be found on one or the other. If there is no rockface about, then it will be up the trees. If no suitable trees occur about a rocky outcrop, then it will be found on the rock. If both are present then *D. pugioniforme* will be similarly distributed. *D. pugioniforme* is a strictly pendulous species which will grow to around two metres in length without any trouble. If growing on a large boulder, or down the trunk of a large tree, it could tumble over the edge for an indefinite distance, taking a grip with its numerous aerial roots as it cascades. Its leaves can be short but broad and plump, like an arrow tip, or very long and wafery thin. These will always have the tell-tale needle point however.

In the wild condition, *D. pugioniforme* is mostly shy to bloom. This is a logical response to the habitat it prefers to colonise i.e. damp and shady. Sometimes plants can be observed in what amounts to full shade. Yet they still manage to set a few blooms. If given more light they will reply with a greater number of flowers however. Occasional clumps, particularly on rockface, will receive high light levels, and such plants are a sight to behold.

A colony I found many years ago was as large as the side of a house, growing in almost total shade on a small cliff. A few years later, a huge fig tree lost its grip and tumbled off the cliff top, taking all the vegetation that provided the shade. The colony of orchids was left in nearly full sun. The next year that *D. pugioniforme* flowered like words could hardly describe. Sure, it had yellowed off a bit and dead patches were streaked through it here and there. But it was trying real hard to doll up the scene with what must surely have been many thousands of highly scented blooms.

These days the vegetation has covered it all up again and the casual observer could never discern the chequered history of that wonderful colony. I have scolded myself frequently for not carrying a camera on that trip. The best specimen plant of *D. pugioniforme* I've yet seen was benched by Ron Wheeldon of ANOS Wollongong Group at their spring show in about 1988. There was an incredible number of beautiful blooms adorning a large hardwood slab of well established orchid. The specimen had obviously been given the "sun" treatment with superb results.

As I've mentioned above, it is easy to grow *D. pugioniforme* so long as you keep it watered at all times. For a host, you can't go past a big clump of *Cyathea* tree fern fibre. Once established, you will n not be able to separate the orchid from this host without killing it. It loves it! Most other substrates will be OK but if using old hardwood you must be aware that it will quickly b e attacked by the usual boring caterpillar (as in electric drill, not 'soap opera') that most of us are afflicted by from time to time. This is the price paid for keeping your Dagger Orchid wet. Cork is good but it is getting scarce and can be attacked by the same caterpillar occasionally. I haven't tried other materials as yet.

Perhaps the best advice I can give to anyone contemplating growing *D. pugioniforme* involves the initial mounting up of the piece. If the plant is a long one, it is very advisable to curl the piece up into a series of figure 'S'. This is what plant propagationists and nurserymen refer to as *'serpentine layering'*. They use this method on climbing plants and vines. In other words, double and triple up the long wiry stems. If covered in epephytic moss, lots of little aerial roots will be initiated from the nodes along the stems and the bases of the leaves. New leading growths soon start growing and in a year or two your small piece will be romping away. If left hanging as a singular long strand, the clumping effect will take many years to achieve.

It is necessary to have at least some roots on the piece of plant you intend to mount up. You may get lucky and successfully establish a long stem without roots but in the main such a piece will quickly die. There are few sights as sickening as a large piece of *D. pugioniforme,* all nicely mounted up in lush green moss, that two weeks later turns bright yellow because it has no roots to nurture itself. When rescuing a plant from a fallen tree, you must exercise caution and retrieve as many of the original roots as possible. In this instance, *D. pugioniforme* and *D. teretifolium* are very similar. With most other *Dendrobium* species, the consequences of root loss are far less life threatening.

The next time you walk through your bush house, take the time to examine your long forgotten Dagger Orchid. Try moving it into a higher light stratum – perhaps up near the roof. Feed it up and water it more often. It will surely reward you with an extra flowering effort. And *D. pugioniforme,* it could be argued, is possible the most brilliant looking native orchid, vegetatively speaking, that we have here in NSW. So don't neglect it – it's an alright orchid! ■

Gerry Walsh
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Llandilo, NSW 2747

VALE – Audrey Madden

It came as a big blow to the orchid world to hear of the death of Audrey Madden.

I have known Audrey and her late husband for over 20 years and have found her a great asset to the orchid world, especially the Orchid Society of NSW. Audrey served on the committee with her daughter Irene for one or two years.

If there was a job to do Audrey was always ready to step in and in later years had been selling the raffle tickets at the general meetings.

When her husband died Audrey took up the reins in the S.P.E.C.I.E.S. society and to the best of my knowledge they were foundation members.

Audrey served a stint as president for a three year term then took the job as the secretary that she held until her death.

Audrey was also secretary for the Berowra society at her death.

Audrey will be sadly missed in the orchid world for her happy nature and ready wit. ■

Gordon Hansen

Managing Western Flower Thrips in Greenhouse and Field Crops

WFT can be difficult to manage, but damage can be kept to a minimum if you take note of these simple management practices.

It is important to monitor crops:

- Use blue or yellow sticky traps* (10x15cm) to monitor your crops.
- Put them throughout your crop, just above the top of the crop.
- Use one trap per 100m2 in field and greenhouse crops.
- Check your traps weekly, replacing them roughly every 2 weeks.
- Use extra traps if you grow crops susceptible to tomato spotted wilt virus (TSWV).

For field crops:

- Face traps into the normal prevailing wind in field crops.
- Place traps around the edge of the crop as well as within.
- Control of WFT in field crops is difficult because new thrips are constantly blown into your crop from weeds and nearby infested crops.

Keep your farm clean

- Control all weeds in and near the crop – they can shelter many WFT and be a continued source of virus disease.
- Flower growers should remove spent crops and flowers promptly.
- Dispose of prunings and crop trash straight away.
- If necessary, plough in crop debris.
- Try to plant new crops when thrips numbers are low – avoid summer and early autumn.
- Don't bring in plants or crop trash from an infested farm.

Good records are vital

- In your diary note signs of:
 - insects and virus disease,
 - numbers of thrips on sticky traps,
 - details of sprays (chemicals used and rate, side-effects: burning etc)
- Ask your local agricultural supplier for sticky traps.

Check your crops often

- Hunt for thrips and symptoms of virus disease.
- Blow gently into flowers, or shake flowers over white paper to find thrips.
- Get into the habit of walking right through your crops in a set pattern.
- Check about 1% of your plants very carefully (use a 10x hand lens), especially check flowers.

For greenhouses:

- Maintain 10m of bare ground or mown grass around greenhouses.
- Don't carry over WFT and virus from one crop to the next:
 - remove all your old crop and any weeds before replanting.
 - fumigate the soil between crops if necessary or,
 - keep the greenhouse empty and sealed for at least 7 days before replanting (it becomes hot and dry which helps pupae hatch and kills emerging adults).
 - hang traps to check for freedom of WFT before replanting
- Use insect proof screens
- Special 'thrips-proof' screens* are available for covering greenhouse vents and doorways. Remember that these may restrict air flow into the greenhouse.

WFT and tomato spotted wilt virus (TSWV)

- WFT spreads TSWV very easily. This means WFT are double trouble for growers of crops susceptible to this virus. There are no treatments to eradicate viruses from infected plants, or to protect against infection, other than removing plants and the thrips themselves.

Reduce the chance of getting TSWV

- Propagate only from healthy stock plants, buy seedlings only from a reliable supplier.
- Check crops regularly – remove any suspect plants. Your local Department of Agriculture diagnostic laboratory can check for TSWV.
- Strict hygiene is important – wash your hands before taking cuttings and disinfect secateurs and knives with a bleach solution.
- Use indicator plants. Petunia, gloxinia and faba beans are attractive to WFT and also good indicators of TSWV. Scatter potted indicator plants around your production area with a non-sticky yellow card or tape beside them to attract thrips. They will show symptoms of TSWV after only a few days. Replace the plants if they show symptoms. Send indicator plants with suspect symptoms to your local diagnostic laboratory for confirmation of TSWV.

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Living Shade Pty Ltd:
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For more information contact:

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Cattleyas

At last the warm weather has arrived to the southern states. Those who live in the northern states are sure lucky if they grow cattleyas. Most cattleyas have either matured their new growths or just starting. You will also find some plants will just be starting to send down some new roots from the emerging new growth or the matured growth.

If the plant is in need of attention such as dividing or potting on – now is the time to do it. When dividing make sure you leave the plant with at least four bulbs. When dividing your plant don't forget to seal the rhizome with STERIPRUNE®. This will seal the cut and stop fungal infection taking place. After dividing and repotting each plant, please sterilize your cutting implement in STERI KLEEN®.

Many growers often ask what is the best medium to pot their catt into. Cattleyas are very accommodating as they seem to grow in most mediums as long as it drains well and does not get soggy. Coarse bark i.e. 8-18mm works quite well. Sphagnum moss mixed with styrene foam also has a good following. What ever medium you use – do not over water!!

Watering should be carried out just as the medium starts to dry. Depending on where you reside this could be around every three or four days over the summer period.

Fertilizing should be carried out weekly. use either GARDEN PARTY®, PETERS ORCHID SPECIAL® or H.S.O22. Don't forget to water your plant before irrigating with your favourite brew!

Watch for scale insects. Use NATRA-SOAP® plus SPRAYTECH OIL® this works very well, and does not upset the environment. ANTISCALE® also works very well.

Watch for black and brown rots. If your plants are susceptible to these rots it usually means you are over watering or the medium is no good. That is no aeration is taking place. It is better to fix the problem than to fix the plant. FOLI-R-FOS® has been used successfully by many orchid growers.

Give plants a little more shade over the summer period so the leaves won't burn.

Cymbidium:

By now all of your dividing should have been completed. After don't forget to give the plants a few applications of your favourite hormone solution. Many growers like to use WUXAL®. This fertilizer has been around for many years.

Newly divided plants should not be overwatered during the summer as the new roots could rot off. Give the plants a little more shade such as 50% (did you know they do not make 50% shade? Now it is called medium).

All old racemes should be removed by now. If you are a hybridizer watch you are developing seed pods over the next few months. The friendly dendrobium beetle likes to eat into your precious seed pods. Some growers dust CARBARYL® over the developing pods. This keeps all the beetles away.

During summer you will have to water every three or four days. During summer water at dusk. Fertilize weekly with your favourite brand. PETERS and HORTICULTURAL SOLUTIONS have a good range of fertilizers to suit mature cymbidiums.

Watch for bulb rot. If present you can use FONGARID®, FOLI-R-FOS®, ALLIETTE®, TERRAZOLE® or PREVICUR®. If you get an attack of *Glomerella spp.* FOLI-R-FOS® seems to work very well. DACONIL® is used as a protectant. The black spot or as it is commonly called "The Sydney Spot", can be controlled with DITHANE 45® (Mancozeb).

The main pest of the cymbidiums would no doubt be the two spotted mite. If present spray every seven to ten days with a mixture of SPRAYTECH OIL® and NATRASOAP®. This mixture is a contact insecticide so you must be very thorough with your spraying. Remember technique is everything if you want to keep your mites under control.

Well this is all for this year. I wish all our readers the compliments of the season and hope that all our readers will grow and flower many beautiful cymbidiums in 1997.

Masdevallia and Dracula

For most genera you must have your shade in place by now. Our summer, all over Australia, is the most stressful time of the year for the Pleurothallid family in general. Be warned, they burn quickly! If it remains dry, this summer will be hot and very hard on your plants!

Unfortunately many Dracula flower at this time and this potentially exciting time for these orchids can change rapidly to disappointment as blooms either abort, fail to open properly, or last only a day or so before shrivelling.

At this time of year the answer to the problem is not easy to achieve as both a decrease in temperature, combined with an increase in humidity is called for. Theories, like pests and diseases abound. I have heard that the best results over the summer will be achieved if the plants are kept a little on the dry side. I do not however, recommend this unless air movement and humidity is maintained at an effective level. Dryness means desiccation and stunted growth.

Those growers with farsight, who have installed evaporative cooling systems, will see the success of their labours manifested in the fantastic shapes and colours that only Dracula can provide.

Masdevallia and particularly those within the section Coccineae, will also appreciate the softer conditions. Remember: desicating and blackening leaf tips indicate the environment is far too arid.

Other problems are also noticed at this time. Firstly, any new growths that fill with water will have a tendency to rot off. Make sure therefore, that after watering, these tender new shoots have the water removed from their centre, blowing through a drinking straw is an effective way of achieving this. These new growths when mature, will support the next crop of flowers, so, the loss of new growth/leaves means a reduction of flower production next season. A plant is also weakened by new growth loss.

Many will also repot at this time but do not divide. When repotting make doubly sure the ramicaul, or that sheath at the bottom of the leaf, is well clear of the medium. This part of the plant is susceptible to rotting and leaf drop if buried. A whole plant can be lost in a night!

Often, Masdevallia and Dracula flower tails or sepaline tips, may be found to have shrivelled during extremely warm spells. The message here is the air is too dry and the plants vascular system is unable to keep up the supply of moisture to the flowers extremities. Overcome the problem, by increasing humidity, as well as reducing temperature. Move the plants to an outside fernery situation or re-stage the plants closer to, or even on the moist enclosure floor. Maintain effective air circulation but NOT warm dry air.

Other genera within the Pleurothallidinae, such as Restrepias and Dryadellas, revel in the warmth, but the atmosphere should be moist and buoyant.

In general, do not make divisions at this time, 6 to 8 taken in the Autumn, establish quickly, Summer divisions usually perish. Evaporative air coolers, as used in the Southern states, may make supplementary misting at this time, unnecessary, however may I remind you that refrigerated systems dry the air to such an extent, that extra humidity must be provided. To do it properly, you need a relative humidity meter.

Aim for a minimum of 60% with maximum temperatures of just under 30°C if at all possible.

Some growth continues at this time, so feeding, still at the weakest rate of around one third to one quarter recommended strength, can be regularly applied. Flushing or watering with pure water every other application can assist in preventing salt build up, that is if your water is low in salt content.

Watering/fertilising should be finished as early in the morning as possible, so that all surface liquid, has dried by the hottest part of the day.

Pests like red spider mite, which can rapidly establish in hot dry conditions, are unable to establish if the humidity is kept high and temperatures moderate. If you see the pest, there are good products available such as OMITE®, but take care, as this is quite toxic and should you have introduced the more desirable control of predatory mites, they will also be eradicated.

Fungal/bacterial rots at this time, are only a problem, during warm wet conditions with poor air circulation and a stagnant atmosphere.

Watch out for aphids on new growths and developing flower buds. As the aphids are sap suckers, you may achieve eradication control with one of the proven systemic insecticides. Many growers just hose the pesky little critters off, but, with a large collection or fear of damaging emerging blooms, the insecticide may be the only way. Do not use liquid/petroleum based preparations as bloom damage will result. Only wettable powder based products can be recommended. Orthene® is still preferred product. Try anything new on a few plants first.

The care and attention to detail you give your plants at this time, will have a great bearing on how they perform next season

Natives

Sitting here in a cold, wet day in early November it is hard to believe summer is here again. The rain will be of benefit to all plants and native orchids should produce a really good lot of new growth this season. Be sure to give them the fertilizer they need to take advantage of the conditions. Remember a little often is the rule and be sure to give it time to soak in before the pots are flushed with rainwater – if possible!

Despite the cold now, we can rely on there being some rather hot days before summer is over. To prepare for these make sure those plants which need cool, humid conditions are in a suitable position. Mounted plants need particular care at this time of the year as they dry out so quickly.

Another source of problems can be fungal and bacterial problems resulting from high temperatures and humidity – particularly on overcast, still days. Good air movement is vital in preventing problems, however in many areas summer wind comes in the hot dry form straight from interior areas. Be prepared to



spray if problems develop but be sure you know what the problem is as many treatments are quite specific.

Keep an eye on what is happening in the pot too as root rots can set in quite quickly in waterlogged pots. If your mix is fairly fine because your conditions are usually on the dry side, a wet summer could cause problems. Pests at this time of the year include caterpillars, aphids, snails and slugs and the *Dendrobium* Beetle. With *Den.* beetles if possible use physical methods before resorting to sprays, but take care they don't reach plague proportions and build up stocks for next year.

Look for damage to plants, particularly new growths. Splitting the sheath on new growths of dendrobiums will let water flow away rather than remain in a pool in the top of the shoot. Keep in mind that the sheath is designed to protect the growth and be very careful not to damage this if you decide to take action. Young growths are very easily broken so it may be better to wait until they are firmer. If growths do start to rot cut the damaged tissue away. A healthy base may remain which then can produce a new lead next year.

Repotting can be continued over summer but remember that there will probably be new growth, both shoots and roots which are quite brittle. If root growth is finished for the year be wary of using a much larger pot and doing a lot of root pruning. It may be better to leave the plant until next spring and get in before growth commences unless the mix is badly decayed or there are other problems.

If overcast, cool conditions prevail care will be needed with tropical plants grown in glasshouses in southern areas. There may not be enough heat and light to mature new growths to their full potential and set flowers for autumn. Unfortunately there is little that can be done to ensure that vents are closed down on days with cold winds to take full advantage of any heat which does build up. Under these conditions fans are critical to ensure air movement and careful observation and prompt treatment is necessary to prevent any fungal problems getting out of hand.

In bloom in early summer and into January will be *Sarcochilus ceciliae* and hybrids, *Dendrobium monophyllum, Calanthe triplicata* and *Cymbidium madidum, C. suave* and *C. caniculatum.* There are also a number of tropical species which bloom at this time, but if conditions continue the way they are not many will be seen in all their glory in southern states this year.

Paphiopedilums

Any outstanding repotting should be attended to early during this period as paphs. really do not like very hot weather and there is no sense in adding the stress of repotting to the stress caused by heat.

The early part of this period is the time to attend to shading. Look for areas of clear glass and spots where the sun shines through open vents. The best conditions are really obtained when extra shade is added during summer and largely removed during winter. If you follow this practice the shade should be in place by now. If, however, you just add a bit extra shade during summer this is the time to do it. Overlong leaves which tend to hang over the side of the pot are a sign of too much summer shade; short, upright, yellowish leaves indicate too little.

Regular watering and fertilising is the routine for this period of the year. Don't overdo it, even when the weather is hot. If the plants don't need water, and you feel you must do something, simply give them a misting with a fog nozzle. It is a good idea to get to know the weight of a pot when wet and when dry; this way you won't keep the plant too wet. The experienced grower can tell by the look of the plants when he needs to water — the leaves droop ever so slightly. Another good trick is to run your hand over the top of the leaves; when they are turgid they rustle — when they need water they don't.

During very hot weather it is good practice to water during the evening. This helps drop the night temperature; it also allows the plant to take up and retain water so that it is better prepared for the heat of the next day.

If you strike a plant which is droopy and dehydrated, even though the mixture is obviously moist, the odds are that it has no roots. Maybe it has been kept too wet. In any case it should be repotted into fresh mixture, no matter what the season. Repotting is usually sufficient but if you feel there is a major problem, a swim in Fongarid for twenty minutes or so (the plant, that it) will do no harm.

Keep an eye out for mealy bug and treat it early if you find it, as it can spread like wildfire. The only other problem you may strike is a fungal infection which appears in hot, humid weather and seems to affect only green-flowered paphs. This appears as small brown spots which quickly turn to holes through the leaves. The effect is almost as though somebody has fired a shotgun — from some distance — at the plant. This does little harm but it is unsightly. It is easily cleared up with Ciba Geigy Rose spray.

Phalaenopsis

There is basically little change in culture from November except that now is the time to remove old flower spikes and repot. When repotting larger plants, just remove the old mix, cut off any rotten roots and pot the plants down in the same size pot or one slightly larger if necessary.

Watering:– Water only in the mornings and damp down the floor in the afternoon if necessary. Try not to get too much water in the crown of the plants.

Light:– 90% shade is required during summer.

Fertiliser:– Fertilise weekly alternating between

- High nitrogen (Campbells B, Aqua Feed, etc.)
- Wuxal Foliar
- Organic (Fish Emulsion or Nitrosol)
- Phostrogen.

Pest Control:– Fungicide every six weeks with Ridomil MZ WP, Daconil, or Mancozeb with Kocide.

Use Malathion or Pyrethrum every four weeks to control insect pests.

Keep a particular watch for mites and use a miticide as necessary.

Vandaceous

Potting:– Potting on of small plants can be done at any time. Top any large plants which have become leggy, leaving at least three roots on the top. If possible some leaves should be left on the old stem to encourage kiki growth.

Watering:– Water daily. Keep root system moist with additional misting if necessary.

Light:– Strap leaf vandas and ascocendas need 50 to 70% shade. Outside vandas 30%.

Fertiliser:– Fertilise weekly alternating over a four weekly period

Wk. 1. – In organic high nitrogen (Campbells B or Aqua Feed)

Wk. 2. – Wuxall Foliar

Wk. 3. – As for Wk. 1

Wk. 4. – Organic (Fish Emulsion or Nitrosol)

Pest Control:– Fungicide every six weeks (e.g. Daconil, Ridomil MZ WP or Mancozeb).

Use Malathion or Pyrethrum to control insect pests.

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AOR 132



Cymbidiums Australia

Presented by the Australian Cymbidium Society Inc



Editor's Report

Gathering Of The Clan

Few recent events have received such accolades or debilitated the supply of adjectives acclaiming success, as the inaugural Australian National Cymbidium Show. Those present attest to the grandeur of the event and the good time had by all. Two days were hardly enough time to catch up with old friends gathered from throughout the length and breadth of the country. For many it was the opportunity to meet identities who previously were just names – turn around and someone was always ready to talk to you. Cymbidium lovers gathered together and enjoying what they like doing most, looking at and discussing the winners, the new and interesting breeding lines etc.

The annual Australian National Cymbidium Show will surely be the place to go each year, and I would liken it to the gathering of the clan.

We welcome Julian Coker as a writer for Cymbidiums Australia. Julian is President of the Orchid Societies Council Of Victoria, he brings us an update on the first Australian Cymbidium Show, a truly historic event, which is destined to become an annual affair of both national and international importance in the orchid world. While we have Julian cornered, another article has been extracted from his pen – *Cym.* Dolly 'Featherhill' 4n, a stud plant profile, one in a continuing series featured in each issue.

While on the subject of shows, a review of the Cymbidium Club of South Australia's 1996 Spring Show is provided, with major winners identified and accompanied by some lovely pictures. Tony Budrovich, Editor of the Cymbidium Club of Western Australia gives us a brief report on this fledgling Club's very first show.

In this edition of Cymbidiums Australia we are bringing you many firsts, and here is yet another. The Australian Cymbidium Society welcomes for the first time, new and regular, guest feature writer Andy Easton, from Rotorua, New Zealand. Andy is undoubtedly the world's most knowledgeable and widely travelled cymbidium expert and hybridiser. I have asked Andy to write on topical subjects that will interest a broad spectrum of enthusiasts. He begins with a subject which puzzles many, "Earliness in Cymbidiums". What does influence early blooming cymbidiums? Is it genetically inherited and composed, or do other factors such as light and fertilisers play a part? I'll let Andy answer that for you.

The importance of housing our plants is often a factor overlooked. Doug and Judy Reah from Sydney are outstanding cut-flower growers. They produce only white standard flowers for the export market, and do it extremely well. In this first article from them, they describe their procedures.

Finally Robert Friend proprietor of Orchids by Olympia at Byron Bay N.S.W. brings us an update on the breeding he has done with Australian species *Cym. canaliculatum.*

Dean Roesler, Editor

President's Report

Ararat 1996 - Australian Cymbidium Epoch

Over the weekend of the 7th and 8th September 1996, the value of a national organisation for cymbidiums was clearly demonstrated. The following quotes illustrate:

- "This Show takes me back to the days when N.S.W. growers filled the Sydney Town Hall with cymbidiums. This is great."... **Kevin Black, well known cymbidium identity, N.S.W.**
- "See you again next year. The best display of cymbidiums I have seen in Australia." ... **John Mata, the doyen of Cymbidium Growers, N.S.W.**
- "It gives me great pleasure to officially open this the inaugural National Cymbidium Show – I hope it will be the annual National Cymbidium Show at Ararat." ... **Steve Scanlon, the Mayor of Ararat.**

What a pleasure it was to spend three days with colleagues at a Regional City that supported our efforts in every possible way. The Town Hall was a fitting location, a beautiful, turn of the century building, with tall ceilings, a plush red carpet, theatre style lighting, and even an upper level viewing area: what a great innovation it was with growers and spectators being able to watch the judging of the orchids on Friday evening from this area – a process that took no more than two and a half hours.

The orchids represented a wonderful showcase of Australian cymbidiums, a blend of old and new, high class blooms in all size categories.

We had the opportunity to view a John Mata *Cym.* Burgundian 'Sydney', the exceptional culture of Victoria's Peter Sunderland, a glimpse of Greg Bryant's new seedlings (the yellow *Cym.* Coraki x Trinity Hall being a show-stopper), Simon Lenkic's quality miniatures and intermediates, and some wonderful displays. The artistic presentation of cut spikes blended amongst plants (a new innovation) by Dean & Mary Roesler together with Keith Moss & Anne Murphy, Phil Grech and Jack & Mary Pianta, the stunning cane basket filled with cymbidiums and presented by Jim & Lorna Hateley, were real eye-catchers. The list goes on, and I leave that task to Julian Coker whose summary appears in this edition of A.O.R.

Whilst lauding the orchids, the Show Dinner will be remembered by all who attended. The Mayor, Steve Scanlon provided some classic poetry to well illustrate the different shapes and sizes of, ... I think it was cymbidiums. We were all touched to hear Ern Kettle's assistance to youth, and how he clearly identified with their problems. The generous acknowledgment given to the likes of David Clark and the committee of the Cymbidium Orchid Society of Victoria were most appropriate and well received. A great night, and a wonderful weekend.

In undertaking a National Cymbidium Show, our committee has confirmed the following:

- an annual National Show must be a permanent feature on the orchid calendar
- enthusiasts will participate if given the appropriate incentives and an environment to enjoy themselves in.

Ararat 1996 sets in place a foundation for an exciting new era for cymbidiums. Already the National Committee is pursuing a number of incentives to ensure that our 1997 show is bigger and better. My advice ... cross off September 1997 as the month that you decide to visit the second Australian National Cymbidium Show.

Graham Guest
President

"CYMBIDIUMS — KING OF THE ORCHIDS"



The Austr Cymb Sh

Text: Julian Coker Photo

On the weekend of the 7th and 8th September 1996 the Cymbidium Societies of South Australia, Victoria and New South Wales combined with the Victorian City of Ararat to present the first Australian Cymbidium Show, and what a magnificent event it was. The leading cymbidium growers of these three states together with a

Top left: *Cym.* Kirby Lesh '105' AM/OSCOV, Grand Champion Cymbidium – Champion Large Flower. Champion Seedling – Award of Merit granted by OSCOV – Owner Guest Orchids. **Below left:** *Cym.* Doris Dawson 'Green Peace' Champion Intermediate – Owner Vic Haskard





First alian idium ow

phy by: Michael Matthews

Queensland grower staged the greatest display of quality cymbidiums ever seen in Australia. In all 56 growers presented over 1,500 plants on 26 stands, many of the plants new seedlings.

Grand Champion Cymbidium was *Cym.* Kirby Lesh '105' grown by National President Graham (and Sue) Guest, a seedling hybridised by Andy Easton using *Cym.* Red Beauty

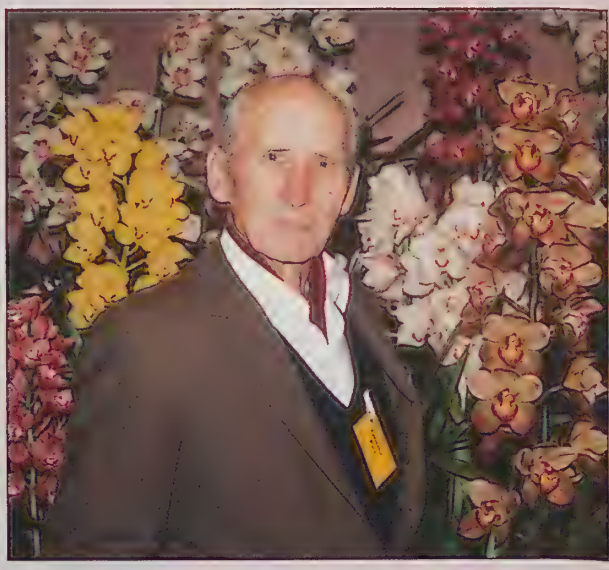




Below: *Cym.* Morialta 'Morialta Falls'. Best Orchid by Popular Vote – Owner Pat & Dave Wickham. **Top right:** *Cym.* Sarah Jean 'Ice Casacade' HCC/OSCOV. Champion Miniature – Champion Specimen Highly Commended Certificate granted by OSCOV – Owner Murray Weston. **Below right:** *Cym.* Rotorua 'Rose'. Champion Cut Flower – Owner John Mata

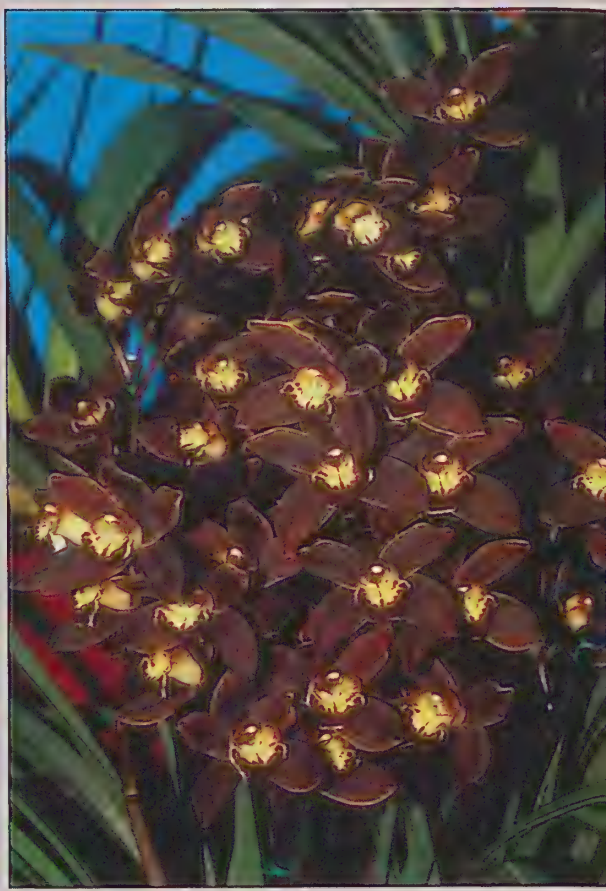












Anticlockwise from top left: *Cym.* Pepper's Fire 'Fiesta' CE/CCSA, AD/AOC. Champion Novelty – Owner John & Mary Harris. • Gold Meda Commercial Display. Won by Kimberley Orchids. • Silver Medal Commercia Display. Won by Dean & Mary Roesler, Keith Moss & Anne Murphy, Phi Grech, Jack & Mary Pianta. • *Cym.* Leilani 'Sweet Reward' CE/CCSA, Commendation for Excellence granted by CCSA – Owner Simon Lenkic Orchids. • John Mata from Sydney, doyen of Australian cymbidium growers

Top right: Bronze Medal Commercial Display Won by Atlantis Orchids. **Below right:** *Cym.* (Lancashire Rose x Terama) 'Anne' HCC/OSCOV. Provisional Highly Commended Certificate granted by OSCOV – Owner Vic Haskard.



'Netty' with *Cym.* Pink Champagne 'Featherhill'. It also won Champion Large Cymbidium and Champion Seedling. The Champion Intermediate Cymbidium was won by *Cym.* Doris Dawson 'Green Peace' grown by Vic Haskard and Champion Miniature Cymbidium was won by the evergreen, *Cym.* Sarah Jean 'Ice Cascade' grown by Murray Weston, it also won Champion Specimen. Champion Novelty Cymbidium was the unusual red peloric intermediate *Cym.* Pepper's Fire 'Fiesta' grown by John and Mary Harris. Popular Vote, cast by the visiting public was won by a hernia-producing *Cym.* Morialta 'Morialta Falls' grown by Pat and Dave Wickham and Champion Cut Flower was won by John Mata with *Cym.* Rotorua 'Rose'. The Champion Commercial Display was won by Peter and Joyce Sunderland proprietors of Kimberley Orchids and Champion Hobbyist Display was won by Brian and Dorathea Noble.

There were also four Orchid Societies Council of Victoria (OSCOV) Awards granted:

Cym. Kirby Lesh '105' AM/OSCOV – Owner Guest Orchids

Cym. Valley Splash 'Painted Lady' AM/OSCOV – Owner Kimberley Orchids

Cym. (Lancashire Rose x Terama) 'Anne'

Provisional HCC/OSCOV – Owner Vic Haskard

Cym. Sarah Jean 'Ice Cascade' HCC/OSCOV – Owner Murray Weston

Considering that cymbidiums are southern Australia's major orchid genus and probably the major genus grown in Australia, it has taken a long time to stage such an event. The wait was however worthwhile, considering the response that exceeded all expectations, and there was a universal spontaneous desire to repeat the event next year. To have the leading cymbidium growers of the three major cymbidium growing states together at the one time, enjoying themselves and displaying their plants was special and will certainly lead to a resurgence in the interest in cymbidiums. The emergence of numerous new and exciting clones have certainly dated many of the old stalwarts and with the current hybridising surge, these newer clones will again re-establish the cymbidium as the King of Orchids.

Amongst the participants, it was great to see a legend in John Mata displaying his specials. John travelled from Sydney to Ararat by train together with his show stems, to make sure that he and his stems arrived in pristine condition. John was announced as being 82 years old although he only admits to being 79. We wonder if he left Sydney in 1993 or has train travel improved recently. He had a marvellous time at the banquet and we certainly look forward to seeing him next year.

The banquet was held on the Saturday night with over 150 in attendance and what a night. It was one of those magical times when all present became involved













Anticlockwise from top left: *Cym.* Valley Splash 'Painted Lady' AM/OSCOV. Award of Merit granted by OSCOV. Owner Kimberley Orchids. • Bronze Medal Hobbyist Display Won by David Clark, Peter & Lois Williams. • Most Innovative Display Won by Jim & Lorna Hateley. • Silver Medal Hobbyist Display Won by Glenda Coutts and Otto Stapelfeldt. • Gold Medal Hobbyist Display Won by Brian & Dorathea Noble

and you really needed to be there to experience one of those highs that result when harmony is complete.

The visionaries who first conceived the show, together with the organisers who made it a reality, are to be congratulated on a job very well done. The participants and helpers who staged the exhibits deserve equal credit and special mention is due to David Clark who was the driving force and liaison between the growers and the Ararat Council. The Council generously sponsored much of the show and the Ararat Orchid Society provided a constant supply of tasty refreshments.

Those who attended were part of a very special event and will return next year. Those who missed out should mark the second national show in their diaries now.

Julian Coker
Lot 2 Brumbys Road
South Warrandyte, Vic. 3134

Earliness in Cymbidiums

by Andy Easton

It is interesting to consider the factors that influence early blooming in cymbidiums. As the genetic influence of non-temperate species expands into mainstream cymbidiums the picture has become more blurred but there are still interesting observations to be made.

The mainstream species that grow across an elevated band of India, Burma, Thailand and China all initiate or develop their flower stems at the end of the monsoon season. Obviously this time coincides with rapidly declining nutrient levels in the pseudobulbs, shortening days, increased light intensity, cooler night temperatures and possibly moisture stress (bulb shrivelling). In Holland where the vast majority of the world's cymbidiums are grown the environmental conditions are controlled with the exception of daylength.

I think from a scientific viewpoint, cymbidiums are considered day neutral plants ie. their flowering is not triggered by changes in daylength per se. Yet it seems to me that the same variety in Holland responds to the more rapidly decreasing daylength at their latitude rather differently than if it were grown in Rotorua, New Zealand or Sydney, Australia. In our experience the same variety will bloom four weeks earlier in Holland, all other environmental factors remaining broadly equal.

This observation would tend to be supported by the experience of Dr. Borg in Finland, twenty five years ago. He had a reputation in Europe as the person who always had the earliest blooming cymbidiums and obviously his plants would have been exposed to rapidly shortening days from the almost total light they received on June 21st.

It is obvious that cymbidiums that are strongly influenced by *Cym. ensifolium* and the other tropical species are triggered to flower quite differently. When crossed with traditional species or hybrids, I would suggest that their offspring flower at the expected time rather than early, bearing in mind that most tropical species are Summer blooming. A most interesting hybrid in this respect has been *Cym.*



Dutchman's Gold (*Cym.* Golden Elf x *Cym madidum*) which in Rotorua flowers in May/June. The crossing was made in January between a very late blooming *Cym. madidum* and a slightly early blooming *Cym.* Golden Elf, yet the flowering time falls back to the midpoint between both extremes.

It has been my observation that Kiwi Orchids in Nelson, New Zealand, our southern most (highest latitude) commercial cut-flower grower will bloom the same standard cymbidium variety in early to mid May that doesn't flower until late June in Adelaide, South Australia. What I see in Adelaide is basically a compression of the cymbidium blooming season at both ends and I believe latitude plays a significant role in this. Of course the higher night and day temperatures in South Australia in late Summer, early Autumn, will have a role to play in retarding spike maturation of standard cymbidiums, while at the same time speeding up the *Cym. ensifolium* derived types.

Really, the more we learn about cymbidiums the more one realises they are very complex plants genetically, so that it is almost necessary to explore the optimum culture of individual clones, just like growers of roses and carnations do. It is not at all unusual for Dutch growers to treat each block of meristems a little differently nutritionally in an attempt to maximise growth and flowering. Their knowledge of specific clonal requirements has developed to a sophistication beyond most Australian or New Zealand growers, yet one could argue that in their difficult and highly competitive environment, such sophistication is almost essential for survival.

Andy Easton
Geyserland Orchids,
P.O. Box 162 Rotorua,
New Zealand

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State Champion – *Cym.* (Sussex Dawn x Tom Thumb) 'Pet' – Owned by K. & J. Podger

Cymbidium Club of Western Australia State Championship

Text: Tony Budrovich Photos: Ivan McFarlane

The Cymbidium Club of Western Australia held its very first Show in July at the Karrinyup Shopping Centre. The Show theme was "Once Upon A Time". There were 149 entries for Judging and there were 10 displays containing some 300 plants.

The quality of displays was summed up by President, Ron Ker, as "Magnificent", as was the effort put in by Club members in preparing them.

The Champion Display was by Ezi-Gro Orchids and the runner up was Pam Cook. Another display of interest was that of Kalamunda Orchids which showed the cycle of breeding cymbidiums from seed pods to plants in flasks and community pots.

The Grand Champion of the Show was



Tony Budrovich Editor, Cymbidium Club of Western Australia

PARENTAGE COUNTS:

Development continues

The cross of Yamba Dream and Temple Court is now registered as Dream Temple. The Dream Temples have Coraki, Zumma Boyd and Sleeping Beauty in their parentage. Dream Temple 'Iceberg' is a good grower and productive ice-green.

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Cym. Dream Temple 'Iceberg'

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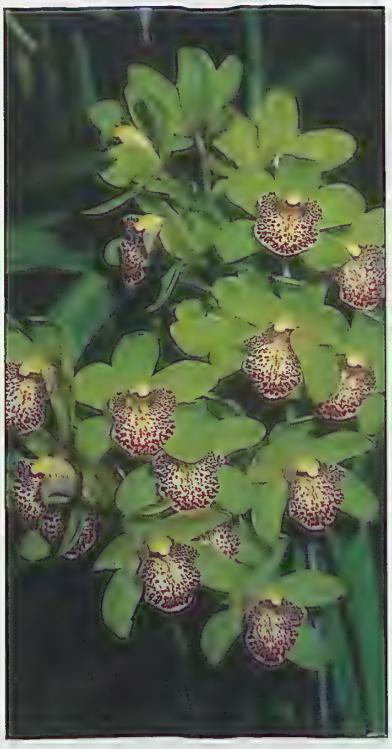
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Reserve Champion – *Cym.* (Fancy Free x Matipo) 'Pink Finish' – Owned by Ezi-Gro Orchids



Cym. Celtic Imp 'Caprice' – Owned by Reg & Maria Screaigh



Cym. Melissa Ann 'Cream Delight' from the crossing of *Cym.* Greenock x *Cym.* Lone Star – Owned by Ezi-Gro Orchids

Cym. (Sussex Dawn x Tom Thumb) 'Pet', a beautiful clear green miniature owned by Keith and Judy Podger. The Reserve Champion was *Cym.* (Fancy Free x Matipo) 'Pink Finish', an eye-catching pink standard with well filled in flower shape, owned by Kevin Butler of Ezi-Gro Orchids.

This was probably the biggest display of orchids in Perth since the 1991 Australian Orchid Conference, and the Club is looking forward to a bigger and better Show in 1997.

Tony Budrovich
Editor, Cymbidium Club of W.A.
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Cym. Dolly 'Featherhill' 4n

by Julian Coker



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Cymbidium Dolly resulted from the crossing of *Cym. pumilum* with *Cym.* Blue Pacific. The most celebrated clone has been *Cym.* Dolly 'Featherhill' 4n and this was first flowered by Andy Easton from a batch of plants obtained by Andy from the Bay Area, California. Some of the original seedlings had been mericloned and the tissue reproliferated in a small laboratory in the nursery, and among them were a number of tetraploids. Andy selected these tetraploids by plant growth and immediately began using them in his breeding programme. At the same time he offered flowering size plants for $50 in his advertisement in the Orchid Advocate. No takers!! Last year a small plant of *Cym.* Dolly 'Featherhill' 4n sold for $80 in California.

The first crosses using *Cym.* Dolly 'Featherhill' 4n were made in 1980 with *Cym.* Nonina 'Joy' 4n and *Cym.* Tom Thumb 'Chit Chat' 4n. In 1981 Andy made the cross of *Cym.* Dolly with *Cym.* Coraki 'Margaret' 4n. This resulted in the now celebrated cross of *Cym.* One Tree Hill. Of these a percentage turned out to be albinos, demonstrating that *Cym.* Dolly carried the albino factor, probably through *Cym.* Blue Smoke which must have been made using *Cym. lowianum* 'Concolor'. Since then numerous crosses have been made using a wide variety of tetraploid partners.

Cym. Dolly 'Featherhill' 4n is a special parent and in time will take its place amongst the greats in hybridising. It is excellent for vigour and floriferousness and produces quality showbench and pot plant clones. The flowers are of intermediate size in the first generation. Best results are obtained when crossed with green, yellow and white partners and if these are albinos or carry the albino factor, a percentage of albinos result in the progeny. With reds, oranges, etc., there is a dilution of the colour and while form is maintained, the colour does not generally have the clarity of colour of the coloured parent. Also the *Cym.* Dolly lip is not a strong feature and this weakness can be passed on in some progeny.

With the success of so many of the first generation crosses, numerous second generation crosses are now also available using such parents as *Cym.* One Tree Hill



Cym. Dolly 'Featherhill' 4n



Cym. Arctic Sunrise 'No.2' (Dolly x Alegria)

(x Coraki), *Cym.* Globetrotter (x Hazel Tyers) and *Cym.* John Gomes (x Robert Rowe). and these are sure to form the cutting edge of intermediate cymbidiums into the future.

Julian Coker
Lot 2 Brumbys Road,
South Warrandyte, Vic. 3134



Cym. Arctic Sunrise 'No.3' (Dolly x Alegria)



Cym. One Tree Hill 'John's Quest' (Dolly x Coraki)

Helpful Advice For Cymbidium Growers

by Doug & Judy Reah

The Site

Before establishing houses in which to grow your cymbidiums you must appreciate your site and compensate for all its shortcomings.

Take our case for example:-

We grow white standard cymbidiums exclusively for an American market.

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Let us look at our site.

We are located on the western side of a hill some considerable distance from the sea, so we do not come under the influence of the cool sea breezes from the east and south, however we are wide open to the west and north. We do not get direct sun until a couple of hours after sunrise, so when the sun finally reaches us, temperatures are well on the way up. The westerly winds bring cold dry conditions in winter and hot dry conditions in summer, so our houses have to be altered to suit both summer and winter extremes. In summer we grow under 30% shade cover, while in winter we cover with fibreglass. Our benches run north and south so that we can drain air "up-slope" and gain maximum light "down paths" for both growing and flowering.

Our benches are approximately two metres wide and we stagger our plants in a zigzag fashion, two across each side of the bench, once again for maximum light and air circulation.

Our "building year" follows this pattern – beginning April 1st (April Fool's Day).

1) Remove all shade covers and put fibreglass on the roofs. The walls remain covered with shadecloth.

2) We now wait for the spikes to begin emerging from the sheath.

3) Cover the walls in fibreglass and install fans to improve air circulation for when the sheds are "shut up".

4) Check to see that all top and bottom shutters are functioning and oil fired boiler is serviced. We have six houses of which two are heated to protect susceptible varieties from cold damage.

5) In August we have to watch the temperature very closely as we begin to experience very hot days, causing blooms to spoil.

6) When hot days arrive, we pull shadecloth over the fibreglass, approximately 60cm above, on a wire.

7) If light is still too high we put white shadecloth under the fibreglass, install sprinkler hoses under the benches to increase humidity if necessary, so the blooms do not dehydrate.

8) At the end of October we begin removing the fibreglass and replace it with the shadecloth again.

Why do we go to all this trouble? Our site is such that if we leave fibreglass on, our temperatures are so high during summer that we get very poor flowering, and we are not keen on growing just green leaves.

If you are going to grow cymbidiums and reap the pleasure that these beautiful blooms can give, you must be prepared to adjust conditions to suit the plants, so that you can gain all the benefits.

Doug and Judy Reah
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The Orchid Review

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AOR 123

Cymbidium Club of South Australia
Spring Show Results

Another highly successful Spring Show was held at the Westfield Shoppingtown West Lakes from August 26th to August 31st 1996. Valued sponsorship was provided by – **Scott's Australia Pty. Ltd. – W. & A. Young & Co. – Arthur Yates & Co. Pty. Ltd. – Westfield Shoppingtown West Lakes – Van Schaik Organic Soils & Bark Suppliers Pty. Ltd. – Peats Soil & Garden Supplies – Garden Grove Supplies – Ctel.**

Seven of the Major Prizes were won by new seedlings shown for the first time. The annual C.C.S.A. Spring Show is providing a forum were new and exciting cymbidiums can be seen. Two plants received Awards, both owned by Murray Weston – *Cym.* Kelly's Winter 'Golden Sovereign' received a Commendation for Excellence, while *Cym.* Gentle Touch 'Bon Bon' was granted two Awards, a Commendation for Excellence as well as a Commendation for Pot Plant Award. The major winners were:



Grand Champion Cymbidium Of The Show
Cym. (Lancashire Rose x Terama) 'Anne' – Owned by V. Haskard



Champion Intermediate, *Cym.* Gentle Touch 'Bon Bon' CE/CCSA, CPP/CCSA – Owner: Murray Weston – Photo: Michael Matthews



Champion Super Standard & Champion Super Standard Seedling, *Cym.* Khan Flame 'Anne' – Owner: Vic Haskard – Photo: Peter Aigner-Muehler



Champion Intermediate Specimen, *Cym.* One Tree Hill 'Doris' – Owner: Vic Haskard – Photo: Peter Aigner-Muehler



Champion Intermediate Seedling, *Cym.* Aussie Rules – Owner: Murray Weston – Photo: Peter Aigner-Muehler



Champion Miniature Seedling, *Cym.* Sharon x Sleeping Beauty – Owner: Elmore & Pam Leske

Display Winners

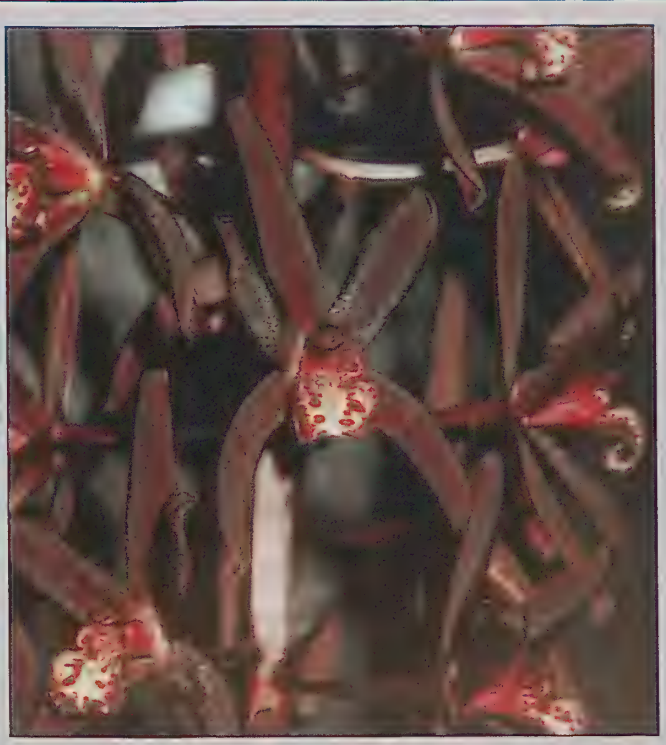
Champion Display – W Baylis/ V Haskard/D & M Roesler/M Weston
Reserve Champion Display – M. Commane
Most Colourful Display – M. & R. Bray – Sims Orchids
Most Innovative Display – M. Commane
Best 2nd Division Display – G. & S. Zerbe
Best Display Over 50 Plants – W Baylis/V Haskard/ D & M Roesler/M Weston
Best Display 31-50 Plants – R. & F. Woolford
Best Display 16-30 Plants – Denlia Orchids
Best Display 6-15 Plants – M. Commane
Best Display Under 6 Plants – G. & S. Zerbe
Most Seedlings – A. Proepster

Champion Cymbidiums Of The Show

Super Standard	*Cym.* Khan Flame 'Anne'	V. Haskard
Standard	*Cym.* (Lancashire Rose x Terama) 'Anne'	V. Haskard
Intermediate	*Cym.* Gentle Touch 'Bon Bon'	M. Weston
Miniature	*Cym.* Plush Canyon 'Kaleidoscope'	J & H Howard
Super Standard Seedling	*Cym.* Khan Flame 'Anne'	V. Haskard
Standard Seedling	*Cym.* (Lancashire Rose x Terama) 'Anne'	V. Haskard
Intermediate Seedling	*Cym.* Aussie Rules	M. Weston
Miniature Seedling	*Cym.* Sharon x Sleeping Beauty	E. & P. Leske
Super Standard Specimen	*Cym.* Mt. Pleasant 'Green Giant'	F. & J. Janko
Standard Specimen	*Cym.* Coco Jim 'Pink Mist'	M. & R. Bray
Intermediate Specimen	*Cym.* One Tree Hill 'Doris'	V. Haskard
Miniature Specimen	*Cym.* Sarah Jean 'Ice Cascade'	R. Brady
Vintage Cymbidium	*Cym.* Charm 'Elegance'	J. Nicholls
Pot Plant	*Cym.* Mini Dream 'Pure Gold'	M. Weston
Hanging Basket	*Cym.* Nancy Maxwell 'Shirley'	E. & P. Leske
Decorative	*Cym.* Solana Fascination 'Amethyst Glow'	M. Weston
Novelty	*Cym.* Plush Canyon 'Kaleidoscope'	J & H Howard
Innovative Hybrid	*Cym. lowianum* x Tethys	A. Proepster
Group of 3 For Colour	*Cym.* Mini Dream 'Pure Gold'	M. Weston
	Cym. Gentle Touch 'Bon Bon'	M. Weston
	Cym. Willunga Regal 'Purple Pageant'	V. Haskard



Right: Champion Innovative Hybrid, *Cym. lowianum* x Tethys, Owner: Tony Proepster – Photo: Peter Aigner-Muehler



Cym. Australian Midnight – Owned by Ken Skaines

Cym. A
Dre

by Robe

In the June, 1996 issue of the A.O.R. the question was asked, "How much breeding has been done with *Cym. canaliculatum* and what results are there to show for it?

In the early 1980s I made a cross of *Cym.* Ann Miller 'Midnight' *x Cym. canaliculatum* var. *sparkesii* using pollen from a clone of the species belonging to York Meredith. York's clone was a dark cherry red with a lighter red mid-lobe to the labellum, where some clones have white. The cross was reasonably fertile and we sold several flasks.

The first seedlings started flowering in 1987 and in 1988 I registered the hybrid as *Cym.* Australian Dream. The colours range from an attractive cherry red to very dark chocolate, with a fine border to the sepals and petals. The labellums are nicely rounded with dark bands as in *Cym.* Ann Miller 'Midnight'.

Flower counts have been quite high – up to 25 as the plants I kept have matured. Flower sizes have varied from 5cm to 6.5cm. The flowers have good substance and texture, are nicely balanced and display themselves well, they open for us in August. I have attempted sibling crosses without success so far.

The plants have normal bulbs and leaves which are often flushed purple towards their bases, being the usual length but slightly thicker than normal cymbidium leaves. Raceme habit is very good being erect, well clear of the foliage and not usually in need of staking. All in all *Cym.* Australian Dream is an attractive hybrid, which leads me to think *Cym. canaliculatum* should be used much more frequently, especially the darker solid coloured forms. Used with some of the more modern, dark, well-shaped cymbidiums, it could well give us that elusive clear red.

About a decade ago Ken Russell of Orchid Glen Nursery, Dungog, listed seedlings of a cross he made of *Cym. canaliculatum var. sparkesii x Cym. atropurpureum (Lindley).* These proved especially popular with growers on the Far North Coast of N.S.W. and in Queensland. Here the coastal climate is a little too warm



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in Spring for normal cymbidiums to produce the flowers they are capable of, but it favours the more tropical cymbidium species of which *Cym. atropurpureum* is one.

I had a few seedlings of Ken's hybrid and had an idea that I might make some crosses using the tropical cymbidium species. As I was using short labels, not long enough to write Ken's cross in full, I phoned him for permission to register the cross as *Cym.* Australian Midnight – alluding to the extremely dark colour of all clones of the cross I had seen. Ken not only gave me that permission, but also described to me the *Cym. atropurpureum* whose pollen he had used as being an exceptionally dark clone. I duly registered Ken's hybrid as *Cym.* Australian Midnight.

Keith Skaines, a well-known grower from Ballina, grows both *Cym.* Australian Midnight and several clones of *Cym. canaliculatum* superbly. Seeing his wonderful array of flowers one Spring I suggested a backcross of *Cym. canaliculatum* to *Cym.* Australian Midnight might be worth making to reduce the latter's plant size. We made two backcrosses, putting *Cym. canaliculatum var. sparkesii* a dark red, large flowered form, and *Cym. canaliculatum* 'Tario', a clear dark brown form onto his best *Cym.* Australian Midnight.

Both crosses were fertile and a few flasks were sold. The seedlings we retained have proven quite difficult to grow, being prone to damp off, even at a quite large size. If any reader has flowered either of these crosses I would appreciate hearing about them. As would be expected, *Cym.* Australian Midnight vegetatively resembles its pod parent, with the addition of longer leaves from *Cym. atropurpureum.* The seedlings with a double dose of *Cym. canaliculatum* resemble that species more closely. As both the species involved flower late in the season I would expect the progeny to flower between October and December.

We have proved that *Cym.* Australian Midnight is fertile. Most clones I have seen have been a dark red – on the purple side of red rather than the brown side – and clear in colour with few or no striations. Perhaps it too can be used with standard and intermediate cymbidium hybrids in search for clear colours in reds and, dare I suggest, purples.

I think *Cym. canaliculatum,* especially the variety *sparkesii* has a lot to contribute as a parent in the field of neat, clear, dark-coloured flowers. Some growers have difficulty growing it, but as its vegetative influence wanes in second and later generation hybrids, its progeny should be easy to grow and should represent valuable and colourful additions to our collections. ■

Robert Friend
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Cym. Australian Dream – Owned by Robert Friend

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Published and printed by
GRAPHIC WORLD PTY LTD
A.C.N. 003 714 967
14 McGill Street, Lewisham, NSW 2049
Australia.
Phone: (02) 9560 6166. Fax: (02) 9560 6677

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WANTED TO BUY – a copy of *Orchidiana Philippiniana* by H. Valmayer. Contact Bill Lavarack 37 Bay St, Pallarenda Qld phone 077 741403.

WANTED TO SELL – a mint copy of *Orchids of Australia the Complete Edition* by W. H. Nicholls. Contact Bill Lavarack 37 Bay St, Pallarenda Qld phone 077 741403.

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Cym. (Valley Bay x Mariner) "Bayside". A new parent which makes its debut in our 1997 catalogue. It flowers late June and retains its shape and freshness until September. It flowered on a small, compact plant. Flowers stay fresh when picked.



Cym. Poetic Winter "White Bowl". A very prolific June flowering white that will produce superb early flowering exhibition and cut flower whites and pinks, especially when bred with our proven cold tolerant parents (such as those illustrated here).



Cym. (Claude Pepper x Tanunda) "Snow Fire". We have been seeking to create early, long lasting, compact growing, exhibition whites with feature labellums such as this for many years and with it we will now create many more. First seedlings flasks from it due in 1998.



Cym. (Nostradamus x *Operetta) "Blushing Bride".* This same cross has produced many fine pinks that have already won prizes at shows and judging by the quality of further seedlings flowered during 1996 we expect their progeny to be equal with the very best!

Our 1997 Cymbidium seedling flask list is now available on request. It is our most comprehensive listing yet and whether you are a pot plant trade, cut flower or show bench grower you will find many items to meet your requirements. Offerings will include a host of new parents from our own breeding program, and, many more ***Ovens Valley*** and ***Valley Zenith "Green Orb"*** crossings.

Our current 21st anniversary **special offer,** which ends on **31st March '97,** is a trial offer from our recently introduced **CYMBIDIUM COMMUNITY POT RANGE.**

For just **$23.00** we will send you **5** well established Cymbidium seedling plants ex-compot (or **10 plants** for **$43.00) including postage and packing.**

The choice of crossings **must** be ours, but as usual, we will select the best show crossings we have available. The range of colours and flowering times will be different subject to any specific colour being unavailable or sold out.

Each plant will be from a different crossing, they will be at least 150mm leaf length and they will be shipped to you bare root by **EXPRESS AIR PARCEL** to anywhere in Australia.

Because of quarantine requirements this offer is not available to W.A. clients at this time.

LIKE TO TRY A FLASK BUT HAVE BEEN AFRAID TO? Well, if you missed our **AUGUST SPECIAL CYMBIDIUM FLASK TRIAL OFFER** this will be repeated during **February '97** when further flask stocks will be available. See our last August advertisement for details.

THERE'S MORE ANNIVERSARY special offers to come and for those who visit our nursery we will have a **MONTHLY SPECIAL** until June 1997.

To RECEIVE our flask or compot lists either **WRITE, PHONE** or **CALL IN** for a copy.

OUR NURSERY and **OFFICE HOURS ARE:** 9.30 am to 4.30 pm 7 days a week (major holidays excepted). After hours phone calls 6.30 pm to 8.30 pm only please.

Those visiting us for the first time should note that ***Western Port Hwy*** is named ***Dandenong-Hastings Rd*** in older directories and we are located 150 metres south of Mackays Rd.

Street Directory Reference:
Melway Map 136 G-3
UBD Map 429 F-15

ROYAL BOTANIC GARDENS MELBOURNE
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